

2014-1657

**United States Court of Appeals
for the Federal Circuit**

MOVE, INC., NATIONAL ASSOCIATION OF REALTORS,
and NATIONAL ASSOCIATION OF HOME BUILDERS,
Plaintiffs/Counterclaim Defendants – Appellees,

RE/MAX INTERNATIONAL, INC., ADVANCED ACCESS, ENEIGHBORHOODS, LLC,
KELLER WILLIAMS REALTY, INC., NORCAL GOLD, INC., DBA RE/MAX Gold, Inc.,
FRANK HOWARD ALLEN REALTORS, ALAIN PINEL REALTORS, INC., BRAD KORB,
CHRISTY MORRISON, PAYMON GHAFOURI, ORANGE COUNTY MULTIPLE LISTING
SERVICE, INC., DBA Southern California MLS, METROPOLITAN MULTI-LIST, INC., DBA
Georgia MLS, Inc., METROLIST SERVICES, INC., DELAWARE VALLEY REAL ESTATE
INFORMATION NETWORK, INC., DBA TREND, NATIONAL ASSOCIATION OF NEW
HOME BUILDERS, PULTE HOMES, INC., THE RYLAND GROUP, INC., SHEA HOMES,
TAYLOR MORRISON, INC., FKA Taylor Woodrow, Inc., AVALONBAY COMMUNITIES,
INC., ESSEX PROPERTY TRUST INC., BRE PROPERTIES, INC., RIVERSTONE
RESIDENTIAL GROUP, LLC, RAPATTONI CORPORATION, THE FIRST AMERICAN
CORPORATION, FIDELITY NATIONAL REAL ESTATE SOLUTIONS, LLC,
BIRDVIEW.COM, INC., DBA Birdview Technologies, IHOMEFINDER, INC., CIS DATA
SYSTEMS, INC., DELTA MEDIA GROUP, INC., DIVERSE SOLUTIONS, LLC,
and WANISOFT CORPORATION,

Counterclaim Defendants,

v.

REAL ESTATE ALLIANCE LTD.,
Defendant/Counterclaimant – Appellant,

EQUIAS TECHNOLOGY DEVELOPMENT LLC,
Defendant/Counterclaimant

*Appeal from the United States District Court for the Central District of California
in Case No. 2:07-CV-02185-GHK-AJW, Judge George H. King.*

**BRIEF FOR DEFENDANT/COUNTERCLAIMANT-APPELLANT
REAL ESTATE ALLIANCE LTD.**

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September 22, 2014

Form 9

FORM 9. Certificate of Interest

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

Move, Inc. v. Real Estate Alliance, Ltd.

No. 2014-1657

CERTIFICATE OF INTEREST

Counsel for the (petitioner) appellant (respondent) (appellee) (amicus) (name of party)

Real Estate Alliance, Ltd. certifies the following (use "None" if applicable; use extra sheets if necessary):

1. The full name of every party or amicus represented by me is:

Real Estate Alliance, Ltd.

2. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by me is:

None

3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party or amicus curiae represented by me are:

None

4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court are:

See attachment for the names of all law firms and the partners or associates that appeared for Real Estate Alliance, Ltd. in the trial court or agency or are expected to appear in this Court.

August 5, 2014

Date



Signature of counsel

Louis M. Solomon

Printed name of counsel

Please Note: All questions must be answered
cc: Robin McGrath, Esq. and Frank Smith, Esq.

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

MOVE INC. v. REAL ESTATE ALLIANCE, 2014-1657

Names of all law firms and the partners or associates that appeared for Real Estate Alliance Ltd. in the trial court or are expected to appear in this court:

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STATEMENT OF RELATED CASES

Two appeals from this same civil action were previously before this court under the captions *Move, Inc. v. Real Estate Alliance Ltd.*, No. 2010-1236, decided March 22, 2011 (“*REAL I*”), and *Move, Inc. v. Real Estate Alliance Ltd.*, No. 2012-1342, decided March 4, 2013 (“*REAL II*”). The motion for rehearing in the second appeal was denied on June 12, 2013.

Counsel for Real Estate Alliance Ltd. knows of two other cases pending that will be directly affected by the Court’s decision in this appeal: *REAL v. Sarkisian*, Civil Action No. 05-cv-03573, and *Sarkisian v. Rooke*, Civil Action No. 06-cv-00170, both pending in the Eastern District of Pennsylvania, which have been administratively suspended pending the outcome of the cases below.

JURISDICTIONAL STATEMENT

The District Court's jurisdiction was based on 28 U.S.C. §§ 1331, 1338(a), 2201 and 2202, and 35 U.S.C. § 271.

This Court has appellate jurisdiction over the District Court's judgment pursuant to 28 U.S.C. § 1295(a)(1).

The District Court's judgment was entered on June 23, 2014. REAL's notice of appeal was filed on July 21, 2014. This appeal is timely pursuant to 28 U.S.C. § 2107(a) and Fed. R. App. P. 4(a)(1)(A).

PRELIMINARY STATEMENT

Claim 1 of U.S. Patent No. 5,032,989 (the “‘989 Patent” or the “Tor-netta Patent”), the patent at issue owned by Real Estate Alliance Ltd. (“REAL”), claims a novel method using a computer for identifying real estate properties available for sale or lease in a selected geographic area and displaying the approximate location of those properties. The ’989 Patent, which claims priority to 1986, represented a groundbreaking advance that revolutionized the marketing of real estate. The claimed invention has for many years been practiced ubiquitously on the websites of most real estate firms with a presence on the Internet.

This appeal involves the proper standard for finding infringement under 35 U.S.C. § 271(a) when the several steps of a method claim are performed by multiple actors working in concert with each other, whether under a contract or otherwise.

After this Court reversed all of its claim constructions, the District Court again declined to hear expert testimony, oral argument, or conduct a hearing of any kind on cross-motions for summary judgment, the District Court erroneously found that *only* public users of the accused website were “selecting an area having boundaries” as required by the claims of the patent-in-suit. The District Court then determined that these members of the public were not under the direction or control of Move, Inc., the National Association of Realtors (“NAR”), and

the National Association of Homebuilders (“NAHB”) (collectively referred to herein as “MOVE”). In so-finding, the District Court ignored the employees of Move, Inc., the employees of many multiple listing services, the employees of NAR, and thousands of real estate brokers and agents, all of whom were contractually related to MOVE, and who were “selecting an area having boundaries” each time that they used the MOVE websites¹ mapping facility. On this factually erroneous and legally incorrect basis, the District Court granted summary judgment of noninfringement. A second appeal to this Court refused to overturn the District Court’s direct infringement analysis but remanded the case for consideration of the question of induced infringement. On remand, the District Court again granted summary judgment. This appeal followed.

The District Court’s error was fundamental in two respects. First, the District Court ignored relevant record evidence to reach its conclusion that *only* members of the public who searched for available real estate properties had selected an area having boundaries. Having thus concluded, the District Court applied the standards set forth in *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1329 (Fed. Cir. 2008), and determined that because MOVE did not direct or control members of the public who used its system, there was no infringement. Upon

¹ These websites include MOVE.com, REALTOR.com, HomeBuilder.com, RentNet.com, and SeniorHousingNet.com (collectively, the “MOVE Websites”).

remand from this Court to consider the issue of active inducement, and without giving the parties an opportunity to present argument or evidence, the District Court concluded that under the holding in *Limelight Networks, Inc. v. Akamai Techs., Inc.*, 134 S. Ct. 2111, 2117-20 (2014), there could be no holding of inducement to infringe given its prior ruling of noninfringement.

In reaching its determination of noninfringement, the District Court failed to give any weight to record evidence that in addition to actions by members of the public, the area selecting step was also performed by (1) Move, Inc.’s own employees during the construction and testing of its computer systems; (2) employees of NAR; (3) employees and agents of many real estate multiple listing services; and (4) real estate brokers and agents who had direct contractual relationships with MOVE.

As REAL set forth in its second appeal to this Court, “[t]he proper standard for the issue of joint direct infringement is presently under [review] by this Court ([*Akamai Techs., Inc. v. Limelight Networks, Inc.*, 692 F.3d 1301 (Fed. Cir. 2012)]), but the issue is not dispositive here because the evidence below demonstrates that the MOVE host computer system performs each and every step of the asserted claims.” Brief for Defendant/Counterclaimant-Appellant Real Estate Alliance Ltd., *REAL II*, No. 12-1342, ECF No. 16 at 4 (the “*REAL II* Appellant Br.”). Now, under the District Court’s findings, that standard is now dispositive.

tive and REAL asks this Court to overrule the ruling in *Muniauction*, and return to long-settled common law tort principles that hold those who act in concert to divide the performance of claim steps liable for infringement of method patent claims.

Because the summary judgment below is based on an incorrectly decided, unsupported, and overly restrictive standard for joint infringement under 35 U.S.C. § 271(a), and on improper disregard of the factual record, that judgment should be vacated, and summary judgment of infringement entered in REAL's favor.

STATEMENT OF THE ISSUE

Did the District Court err by improperly granting summary judgment when the facts of record show that the MOVE system infringes the claims of the '989 Patent when it selects areas having boundaries on the basis of actions of persons who perform the claimed steps in concert with MOVE?

STATEMENT OF THE CASE

This matter has been pending before the courts since April 3, 2007, and no trial date has ever been scheduled by the District Court. This is the third appeal to this Court.

This action (CV 07-2185) was commenced on April 3, 2007, when MOVE filed suit seeking a declaratory judgment that U.S. Patent No. 4,870,576 (the “576 Patent”) and the ’989 Patent, assigned to defendant REAL, were invalid and/or not infringed by MOVE, as well as other state law claims not at issue here. On August 8, 2007, REAL and Equias Technology Development LLC (“Equias”) filed an answer and counterclaims alleging that MOVE infringed both the ’576 Patent and the ’989 Patent. MOVE filed a second amended complaint on January 12, 2009. A235-61. REAL’s and Equias’ answer and counterclaims to the second amended complaint were filed on February 11, 2009. A262-321.

On March 11, 2008, REAL filed a separate complaint (CV 08-1657) against NAR, NAHB and several other defendants (the “secondary defendants”). A240; A267. That action was consolidated into CV 07-2185 (CV 08-1657 being dismissed without prejudice) on October 22, 2008. A234; A267. All proceedings against the secondary defendants have been stayed pending a final determination in this matter. A578. A court ordered stipulation has both primary and secondary defendants bound by the claim construction and the outcome of this case. A621-22.

On February 11, 2009, the District Court issued a Scheduling Order (A322-24) rejecting the parties’ proposals for claim construction briefing and hearing and setting down a schedule that permitted only the filing of “a summary

of expert opinion" and a "fully integrated joint brief." A322. The District Court did not seek or receive an "expert tutorial" (A323) and declined the parties' renewed joint request for a hearing or argument on claim construction. A325-33.

The District Court issued its construction of the disputed claim terms on November 25, 2009. A564-77. The parties subsequently filed a Joint Stipulation of Noninfringement in which REAL conceded that MOVE's accused websites did not satisfy certain claim limitations under the court's claim construction. A579-84. The District Court thereupon dismissed REAL's counterclaims for infringement of the patents in suit (specifically, Claims I-III of REAL's Counter-claims (A299-304)), and entered judgment in favor of MOVE on the second and fifth claims for relief in MOVE's second amended complaint (insofar as those claims are a mirror image of Claims I-III of REAL's counterclaims). A587 ¶ 4. The District Court certified its judgment on those claims and counterclaims as final under Fed. R. Civ. P. 54(b). A588 ¶¶ 7-8. The *REAL I* appeal followed.

On March 22, 2011, this Court found in favor of REAL with respect to the construction of five disputed claim term constructions, reversed the District Court's judgment of noninfringement, and remanded for further proceedings, "consistent with this opinion." A602. The Court's decision in *REAL I* is published at 413 F. App'x 280.

The District Court then ordered that a joint submission on motions for summary judgment be submitted by the parties. A603-04. Cross-motions were briefed, and expert reports submitted. A622. No hearing or tutorial was held by the court, and on January 26, 2012, the court granted summary judgment of noninfringement to MOVE on the basis that the selection of areas was performed exclusively by human users, and not by the MOVE host computer system, and that such human users were exclusively members of the public who were not under the direction and control of MOVE. A626. The *REAL II* appeal followed.

On March 4, 2013, this Court found against REAL, agreeing with the District Court that the selection step of the patent was performed by members of the public who were not under the direction and control of MOVE, and that because not all steps of the claims-in-suit were performed by a single entity, MOVE was entitled to summary judgment of noninfringement under 35 U.S.C. § 271(a). A73-74. Consistent with this Court’s decision in *Akamai*, 692 F.3d 1301, however, the matter was remanded for a determination of whether REAL was entitled to a finding of induced infringement under 35 U.S.C. § 271(b). A74-75. On May 3, 2013, MOVE filed its petition for rehearing, which was opposed by REAL on May 24, 2013 and denied by this Court on June 12, 2013. The Court’s decision in *REAL II* is published at 709 F.3d 1117.

On June 23, 2014, after the decision of the Supreme Court in *Akamai*, 134 S. Ct. 2111, and without offering the parties any opportunity to present evidence or argument, the District Court reinstated its summary judgment of noninfringement. This appeal followed.

STATEMENT OF FACTS

A. The Claimed Invention

REAL is the owner of the '576 Patent (A44-65) and the '989 Patent (A22-43). The '989 Patent is a continuation-in-part of the '576 Patent. Both patents expired during the pendency of this litigation. They describe methods for locating real estate properties available for sale or lease by using a database of available properties to display the approximate location of such properties. When the patents were issued, the claimed zoom-enabled map interface was a groundbreaking invention. Today, it is practiced ubiquitously on the websites and mobile apps of most entities involved in the sale, lease, or rental of real estate with a presence on the Internet.

Both patents were asserted in the District Court. To simplify its prior appeal, REAL sought and now seeks only to enforce the claims of the '989 Patent, Claim 1 of which reads as follows (A43):

1. A method using a computer for locating available real estate properties comprising the steps of:

- a) creating a database of the available real estate properties;
- b) displaying a map of a desired geographic area;
- c) selecting a first area having boundaries within the geographic area;
- d) zooming in on the first area of the displayed map to about the boundaries of the first area to display a higher level of detail than the displayed map;
- e) displaying the zoomed first area;
- f) selecting a second area having boundaries within the zoomed first area;
- g) displaying the second area and a plurality of points within the second area, each point representing the appropriate geographic location of an available real estate property; and
- h) identifying available real estate properties within the database which are located within the second area.

The claimed invention provides zoom-enabled maps populated in real time with the geocoded locations of available properties from a continuously updated property database. For example, today, the host computer system of the invention can be accessed on the Internet by a prospective home buyer using a personal computer or mobile smart phone or tablet from a remote location. The prospective buyer, or her real estate broker or agent, can search for available real

estate properties in a selected geographic area anywhere in the world, and obtain extensive data concerning each such property.

Consistent with the language of Claim 1 describing the invention as “[a] method using a computer,” the ’989 Patent specification and the Appendix filed with its priority application (A334-563) make it clear that the invention is implemented by the host computer with user interaction. The specification describes how the host computer “selects” world coordinates (A41 (Col. 11:22-25)) equal to the boundaries of a geographic area of interest (*see, e.g.*, A36 (Col. 2:1-2); A37 (Col. 4:49-50); A41 (Col. 12:34-36)) and processes those world coordinates in the zooming (*see, e.g.*, A41 (Col. 11:26-27)) and displaying steps of the invention (*see, e.g.*, A41 (Col. 12:16-17)). The Appendix states that the displayed map “consists of data points mapped to an arbitrary world coordinate system” and that further processing of the zooming and displaying steps is “accomplished by setting the world coordinate boundaries equal to the boundaries of the rubberband box being displayed.” A335-36.

One novel aspect of the claimed invention, in which a host computer implements zoom-enabled maps showing the location of available real estate properties, is clear. Prior to the invention, real estate search and location was an inefficient process that largely depended upon real estate agents for their exclusive

knowledge of locally available properties. As summarized the prior art in the '989 Patent specification (A36 (Col. 1:17-30)):

Listings of available real estate are typically stored in a central computer system, generally referred to as a "multiple listing service". This computer-stored listing may be accessed through terminals for retrieval of specific information relating to a given property. However, search of the stored information is typically dependent on the operator's intricate knowledge of the local area, its political subdivisions, and informal housing tract designations. Furthermore, such listings are usually maintained for each county, and multiple accesses of diverse systems are often required for a complete location of all available properties. Finally, no provision for searches by multiple criteria, including geographic location is made in prior systems.

To put the invention in further perspective, the priority application describing the claimed zoom-enabled map interface was filed on March 19, 1986, five years before the World Wide Web was described and the first website was put on line on August 6, 1991. *See, e.g., Matthew Werner, Google and Ye Shall Be Found: Privacy, Search Queries, and the Recognition of a Qualified Privilege*, 34 Rutgers Computer & Tech. L.J. 273, 275 n.17 (2007). Moreover, the first graphical browser program was released on January 23, 1993, seven years after the priority application was filed. *See* Tim Berners-Lee, "New XMosaic World Wide Web Browser from NCSA," https://groups.google.com/forum/#!original/comp.infosystems/aPbn2mVRoBc/csYJN_c6v2UJ. Having recognized the ever-increasing popularity of the Internet and its commercial potential to the industry,

multiple listing services have broadly used websites that represent available properties in their databases on zoom-enabled maps.

B. MOVE's Accused Websites

MOVE and its subsidiaries operate multiple websites that advertise available real estate properties, including MOVE.com, REALTOR.com, Home-Builder.com, RentNet.com, and SeniorHousingNet.com. A149 ¶¶ 1-2; A155 ¶¶ 2-3. As MOVE admits in its statement of uncontroverted facts, MOVE's operation and maintenance of the MOVE Websites are made possible only by receiving listings of available real estate properties and myriad information concerning each such property (and displaying the listings and other information on the MOVE Websites) from other entities (multiple listing services and their member brokers and agents) which are bound to MOVE by contracts, including those named as counterclaim defendants. A151-53 ¶¶ 57-71.

REAL contends that MOVE infringed the '989 Patent prior to its expiration by displaying on zoom-enabled maps on the MOVE websites the location of more than three million real estate properties available at a given time for sale or rent throughout the country. A299-304; A613. REAL contends that MOVE is liable for directly infringing, inducing infringement, and contributorily infringing the '989 Patent. A299-304. REAL alleged direct infringement by MOVE through both sole direct infringement and joint direct infringement. A299-304.

MOVE's motion for summary judgment of noninfringement admitted that, although certain steps of the claimed method (steps a, b, d, e, and g) were performed by its host computer, the area selecting steps (steps c and f) were performed only by the individuals who used the system to search for real estate properties, and alleged that these individuals did not fall under the direction or control of MOVE. A609 ("To the extent any one selected areas having boundaries, it was the user, not [MOVE], who did so"). The District Court thus concluded that this division of method steps required a finding of noninfringement under *Muniauction*, 532 F.3d at 1329-30. *See A622; A626.*

In his declaration in opposition to MOVE's motion for summary judgment (A156-233), REAL's expert Dr. Dennis Shasha showed through a series of "screenshots" that the host computer (implementing an exemplary one of the accused websites, MOVE's REALTOR.com) carried out each step of the claimed method in the course of a search for real estate in Los Angeles, California. A161-64; A178-87. These screenshots are more fully described in REAL's prior brief. *See REAL II Appellant Br. at 14-19.* As admitted by MOVE, users interact with this computer system by pointing and clicking on a single point on a map displayed on screen, or on a menu, which the computer then programmatically translates to an "area having boundaries" which it then selects. A612.1-12.2; A624. It is the record evidence concerning several types of MOVE's non-public users and their

contractual ties to MOVE that the District Court ignored in its determination of the summary judgment motion. A155-55.3 ¶¶ 6, 17, 20.

Dr. Shasha concluded that every step of Claim 1 of the '989 Patent is performed by the MOVE System as it interacts with user inputs that designate mere points – single locations, that are computationally transformed into areas having boundaries, as required by Claim 1. A164.

After this Court's reversal of the claim construction, and after initially denying MOVE's motion for summary judgment of noninfringement (A234), the District Court granted MOVE's renewed motion for summary judgment ignoring record evidence and concluding, “[b]ecause the [MOVE] Websites do not perform the ‘selecting’ steps of Claim 1, [MOVE] cannot be held liable for directly infringing Claim 1 of the '989 Patent.” A626. The District Court refused to permit oral argument or hold an evidentiary hearing, ignored record evidence, and continued to hold the flawed view that all users' actions were not chargeable to MOVE under the contractual relationships among them, and further, that performance of the method steps in concert by multiple actors was insufficient to find infringement under 35 U.S.C. § 271(a).

As this Court pointed out in its prior decision, “[w]e see nothing in the selecting step that requires the selecting be done exclusively by human users or computers.” A598-99. The District Court turned to Judge Moore's hypothetical

posed in oral argument for instruction. This hypothetical, involving objective criteria for defining a geographic area was characterized by MOVE's counsel as distinct from MOVE's system. Counsel's statement was false. MOVE's website was, during the life of the '989 Patent, able to automatically select a geographic area having boundaries based on objective criteria – the MOVE "Find-a-Neighborhood" function, which used criteria such as home price, school ratings, and household income – not the precise ones posited by Judge Moore in her example, but exactly the function that she described. Further, '989 Patent Claim 1 is silent as to the criteria used to select the geographic area.

C. The Decisions Below

REAL's claim is to a method using a computer. The District Court's original claim construction (reversed by this Court) first inserted the human user into REAL's claims. In almost every patented method, a user may be implied, either as a participant carrying out one or more method steps, or as a "prime mover" pressing the button to initiate the method. Reading this phantom user into a claim that does not expressly recite user actions, as here, however, rewrites the claim into a totally different one from that claimed by the patentee. The District Court then compounded this error, cloaking it in the language of the "single entity" rule. The District Court has consistently misread the patent claims and this Court's

opinions. Finding that some public users chose areas, it halted its analysis, ignoring all other users bound by contract to MOVE, and awarded summary judgment.

A proper understanding would have applied the standard of joint tortfeasors, and actors acting in concert with one another. A finding of infringement follows from this proper understanding, because all of the claim steps are performed, thus harming the patent owner, and MOVE is the party whose actions most directly cause this harm, making it, and its contractual allies properly liable for their infringement. For all of these reasons, the ruling of the District Court should be reversed, infringement should be found, and the case remanded for trial without further delay.

SUMMARY OF ARGUMENT

Summary judgment of noninfringement was granted to Move, Inc., NAR and NAHB. These actors, along with the members of the two associations, tens of thousands of real estate brokers, agents, and the multiple listing services that they established and operated, collaborated to infringe the pioneering Tornetta Patent (a/k/a the '989 Patent). Move, Inc., NAR and NAHB constructed a set of Internet websites that enabled, instructed and invited association members, employees, and the public to map the locations of available real estate properties with the click of a mouse using precisely the method claimed in the '989 Patent. Under this Court's "single entity" rule, those actions are immunized from liability – a

result that defies common sense, reason, and the history and rationale of the Patent Act, 35 U.S.C. § 101 *et seq.*

Under this narrow, recently minted “single entity” rule, multiple actors who wish to practice a patented method may simply divide up the steps of the method and infringe with impunity. But traditional common law principles, which courts have traditionally consulted in interpreting the Patent Act, make clear that liability for direct infringement, as for any other tort, may arise under accepted theories of joint liability, including direction, control, and concerted action. Interpreting Section 271(a) in this way also aligns with the policies underlying the Patent Act while protecting innocent actors who do not know that each step of the patented method will be performed.

The District Court’s summary judgment of noninfringement is incorrect, because the Court ignored clear evidence that Move, Inc., NAR, NAHB and their users acted in concert to perform the patented method steps. The “users” of the MOVE websites included more than just members of the public who searched for available listings, as the District Court held. The record reflects that MOVE’s “users” also included real estate brokers and agents, employees of many multiple listing services, and employees of NAR. All of these “users”, as well as the public users on whom the District Court fixated, acted in concert with MOVE to perform the patented method steps.

Furthermore, because MOVE and its users acted in concert to perform all of the claimed method steps, MOVE may be properly held liable under 35 U.S.C. § 271(b) for actively inducing infringement of the '989 Patent. MOVE “actively induces infringement” when it knowingly causes or brings about performance of the claimed method steps.

ARGUMENT

I. THE STANDARD OF REVIEW

This Court reviews the grant of summary judgment *de novo* and without deference to the District Court. *Marine Polymer Techs., Inc. v. HemCon, Inc.*, 672 F.3d 1350, 1357 (Fed. Cir. 2012); *Dayco Prods., Inc. v. Total Containment, Inc.*, 329 F.3d 1358, 1362 (Fed. Cir. 2003).

Summary judgment is appropriate when there is no genuine issue as to any material fact and the moving party is entitled to judgment as a matter of law. [Fed. R. Civ. P. 56(c); *Johnston v. IVAC Corp.*, 885 F.2d 1574, 1576-77 (Fed. Cir. 1989)]. Thus, summary judgment may be granted when no “reasonable jury could return a verdict for the nonmoving party.” [*Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986)]. In deciding whether summary judgment was appropriate, we view the evidence in a light most favorable to the party opposing the motion with doubts resolved in favor of the opponent

Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp., 149 F.3d 1309, 1315 (Fed. Cir. 1998).

II. SECTION 271(a) PERMITS JOINT LIABILITY FOR DIRECT INFRINGEMENT UNDER A THEORY OF DIRECTION, CONTROL, OR CONCERTED ACTION

The text of the Patent Act and background common law principles permit and, indeed, compel liability for direct infringement of a method patent when multiple actors, working in concert or under common direction or control, perform every step of the claimed method in the United States, as they did in this matter. The Federal Circuit's contrary rule promulgated in *Muniauction* depends on a rigid, recently minted "single entity" rule that is inconsistent with the statutory language and introduces an unwarranted and unwise nonstatutory requirement into patent protection for method claims.

Section 271 generally, and Section 271(a) in particular, must be construed to allow for infringement of a method claim by more than one entity – even while acknowledging that it is appropriate to separate participation in infringement from liability for such infringement. Specifically, this Court should clarify that infringement occurs when all the claimed elements are performed, without regard to the number of actors, as is appropriate under the traditional principles of tort law for joint tortfeasors that have long governed infringement determinations. But, identifying the party or parties responsible for that harm, *i.e.*, those who may be held liable and subject to paying damages, should be separately assessed under

those same principles of tort law liability, especially as developed in the case law both before and after the 1952 Patent Act.

Particular panels of this Court have created an inflexible “single entity” rule under Section 271(a), whereby “direct infringement requires a single party to perform every step of a claimed method” and “‘arms-length cooperation’ will not give rise to direct infringement by any party.” *Muniauction*, 532 F.3d at 1329 (citation omitted). This judicially created rule, lacking any basis in the statutory text dates back only a few years and has become significantly more rigid in successive cases decided during the pendency of the present litigation, culminating in the panel decision in *Akamai*, which imposed a *per se* rule of no Section 271(a) liability except in cases involving a formal agency relationship or contractual obligation to perform claimed steps. 692 F.3d at 1307.

Section 271(a) provides that, “whoever without authority . . . uses . . . any patented invention . . . infringes the patent.” 35 U.S.C. § 271(a). As a matter of statutory interpretation, the subject of Section 271(a) is “whoever.” Congress set forth in 1 U.S.C. § 1 that singular terms include plurals unless the context indicates otherwise, *e.g.*, “a single person,” and therefore Section 271(a) applies to one or more persons.² There is nothing in the context or history of Section 271(a)

² “In determining the meaning of any Act of Congress, unless the context indicates otherwise – words importing the singular include and apply to several per-

that indicates Congress intended to limit Section 271(a) to “single entities” thus immunizing joint tortfeasors.

Other Patent Act provisions also use “whoever” to refer to multiple actors. For example, the statute repeatedly uses “whoever” to refer to inventors who may obtain patents, including joint inventors, *e.g.*, 35 U.S.C. § 101 (“Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter . . . may obtain a patent therefor”); 35 U.S.C. § 161 (same for plant patents); 35 U.S.C. § 171 (same for design patents). Because multiple inventors may jointly hold a patent, *see* 35 U.S.C. § 116(a), the term “whoever” necessarily includes multiple actors. It follows that the same word, when used in Section 271(a), also covers multiple parties that together “us[e]” an invention without authorization. *See Sullivan v. Stroop*, 496 U.S. 478, 484 (1990) (“[I]dentical words used in different parts of the same act are intended to have the same meaning”) (citations & internal quotation marks omitted); *Gustafson v. Alloyd Co.*, 513 U.S. 561, 568 (1995) (same); *accord Voracek v. Nicholson*, 421 F.3d 1299, 1304 (Fed. Cir. 2005).

sons, parties, or things; words importing the plural include the singular . . . the words ‘person’ and ‘whoever’ include corporations, companies, associations, firms, partnerships, societies, and joint stock companies, as well as individuals. . . .” 1 U.S.C. § 1.

III. COMMON LAW PRINCIPLES AGAINST WHICH CONGRESS LEGISLATED ALSO SUPPORT RECOGNIZING JOINT LIABILITY UNDER SECTION 271(a)

“[W]here Congress uses a common-law term in a statute, we assume the ‘term . . . comes with a common law meaning,’” *Microsoft Corp. v. i4i Ltd. P’ship*, 131 S. Ct. 2238, 2245 (2011) (citation omitted), and ““the common law ought not to be deemed repealed, unless the language of a statute be clear and explicit for this purpose.”” *Norfolk Redev. & Hous. Auth. v. Chesapeake & Potomac Tel. Co.*, 464 U.S. 30, 35-36 (1983) (citation omitted).

Here, common law tort principles ought control the interpretation. Patent infringement, “whether direct or contributory, is essentially a tort.” *Carbice Corp. of Am. v. Am. Patents Dev. Corp.*, 283 U.S. 27, 33, *supplemented on reh’g*, 283 U.S. 420 (1931). The Supreme Court has consistently relied on tort law principles in interpreting the Patent Act, *e.g.*, *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476, 500-01 (1964) (noting that “a contributory infringer is a species of joint-tortfeasor” and discussing common law tort principles). In enacting the Patent Act, Congress “legislate[d] against a legal background of ordinary tort-related vicarious liability rules and consequently intend[ed] its legislation to incorporate those rules.” *Meyer v. Holley*, 537 U.S. 280, 285 (2003).

The law has also long recognized joint liability for torts committed by multiple defendants acting in concert. “The original meaning of a ‘joint tort’ was

that of vicarious liability for concerted action.” W. Page Keeton *et al.*, *Prosser & Keeton on the Law of Torts* § 46 (5th ed. 1984); *see also Restatement (Second) of Torts* § 876(a) (1979) (a person is liable when he “does a tortious act in concert with the other or pursuant to a common design”); Fowler V. Harper, *A Treatise on the Law of Torts* § 302 (1933) (joint liability when there is “concert of action,” meaning “two or more persons actually participate in the wrongful action in pursuance of a common plan or design”); 2 Dan Dobbs *et al.*, *The Law of Torts* § 435 (2d ed. 2011) (joint liability for “[t]hose who cooperate, tacitly or expressly, in particular conduct to pursue a common illegal design”).

Contrary to this Court’s *per se* rule, the common law did not restrict joint liability for concerted action to cases in which one party was another’s agent or contractual obligor. Rather, a “common plan or design” was sufficient. Harper, *supra*, § 302; *see also* Prosser & Keeton, *supra*, § 46 (“common purpose, with mutual aid in carrying it out”). Thus, two people were jointly liable when “there was evidence which tended to show that they acted in concert, and to accomplish a common object” even though they “did not participate directly in all of the . . . acts of the other.” *Price v. Price*, 60 N.W. 202, 205 (Iowa 1894). And even without a “prearranged plan,” joint liability arose when “one person act[ed] to produce injury with full knowledge that others [we]re acting in a similar manner and that his conduct w[ould] contribute to produce a single harm.” Harper, *supra*, § 302.

Courts also impose liability for harm done by multiple actors, even though each act alone was not a tort. *See* Prosser & Keeton, *supra*, § 52 (“[A]cts which individually would be innocent may be tortious if they thus combine to cause damage”).

At common law, a person was “subject to liability for the consequences of another’s conduct which results from his directions as he would be for his own personal conduct if, with knowledge of the conditions, he intends the conduct, or if he intends its consequences.” *Restatement (First) of Agency* § 212 (1933). This rule “is not dependent upon the law of agency but results from the general rule, stated in the *Restatement of Torts*, that one causing and intending an act or result is as responsible as if he had personally performed the act or produced the result.” *Id.* § 212 cmt. a. It “is equally applicable to situations not involving an agency relationship.” *Id.*

IV. JOINT LIABILITY EXISTED PRIOR TO ENACTMENT OF THE 1952 PATENT ACT

These joint liability principles were applied in patent cases predating the 1952 Patent Act. *See Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 26 (1997) (“[P]re-1952 precedent survived the passage of the 1952 Act”). Before becoming President and Chief Justice, Judge William Howard Taft ex-

plained that joint liability for patent infringement was consistent with common law tort principles and essential to fulfilling the purpose of the patent laws:

An infringement of a patent is a tort analogous to trespass or trespass on the case. From the earliest times, all who take part in a trespass, either by actual participation therein or by aiding and abetting it, have been held to be jointly and severally liable for the injury inflicted. There must be some concert of action between him who does the injury and him who is charged with aiding and abetting, before the latter can be held liable. When that is present, however, the joint liability of both the principal and the accomplice has been invariably enforced. If this healthful rule is not to apply to trespass upon patent property, then, indeed, the protection which is promised by the [C]onstitution and laws of the United States to inventors is a poor sham.

Thomson-Hous. Elec. Co. v. Ohio Brass Co., 80 F. 712, 721 (6th Cir. 1897); *see also Wallace v. Holmes*, 29 F. Cas. 74, 80 (C.C.D. Conn. 1871) (imposing joint liability where the parties “engaged in a common purpose to infringe the patent, and actually, by their concerted action, produc[ed] that result”); *N.J. Patent Co. v. Schaeffer*, 159 F. 171, 173 (C.C.E.D. Pa. 1908) (“Where an infringement of a patent is brought about by concert of action between a defendant and complainants’ licensee, all engaged directly and intentionally become joint infringers”), *aff’d*, 178 F. 276 (3d Cir. 1909); *Jackson v. Nagle*, 47 F. 703, 704 (C.C.N.D. Cal. 1891) (contractor and subcontractors were liable as “joint infringers” of a method claim where “a portion of the work was done by . . . the contractor, and other portions by the subcontractors”).

Similarly, leading pre-1952 patent treatises by Robinson and Walker, which this Court has often cited, recognized joint liability for patent infringement beyond the confines of any purported “single entity” rule. Robinson’s 1890 treatise taught that “[a]n act of infringement is committed by . . . acting in complicity with others under any cover or pretense the practical effect of which is an invasion of the monopoly created by the patent. All who perform or who unite in the performance of an act of infringement, by any of these methods, may be sued jointly or severally at the option of the plaintiff. . . .” William C. Robinson, *The Law of Patents for Useful Inventions* § 946 (1890). Walker stated that “[w]here several persons cooperate in any infringement, all those persons are liable therefor as contributors thereto. In that, as in all cases of torts for which several persons are liable, all may be sued jointly, or any of them may be sued alone.” Albert H. Walker, *TextBook of the Patent Laws of the United States of Am.* § 406 (4th ed. 1917).

V. MORE RECENT DECISIONS RECOGNIZE JOINT LIABILITY

Many more recent decisions have properly applied the law of joint tortfeasors to the question of patent infringement. *See, e.g., Cordis Corp. v. Medtronic AVE, Inc.*, 194 F. Supp. 2d 323, 349 (D. Del. 2002) (finding infringement when one step was performed by a manufacturer and the remaining steps by a

customer), *aff'd in part, rev'd in part & remanded on other grounds*, 339 F.3d 1352 (Fed. Cir. 2003); *W.R. Grace & Co.—Conn. v. Interact, Inc.*, 60 F. Supp. 2d 316, 326-27 (D. Del. 1999); *E.I. DuPont De Nemours & Co. v. Monsanto*, 903 F. Supp. 680, 735 (D. Del. 1995) (“cases establish that a party cannot avoid liability for infringement by having someone else perform one or more steps of a patented process for them”), *aff'd*, 92 F.3d 1208 (Fed. Cir. 1996); *FMC Corp. v. Up-Right, Inc.*, 816 F. Supp. 1455, 1461 (N.D. Cal. 1993) (“[u]nder federal patent law, when infringement results from the participation and combined or successive action of several parties, those parties are joint infringers, and are jointly liable”), *aff'd*, 21 F.3d 1073 (Fed. Cir. 1994); *McDermott v. Omid Int'l*, 723 F. Supp. 1228, 1236 (S.D. Ohio 1988) (“[w]here the infringement is the result of the participation and combined actions of the defendants, they are joint infringers and are jointly liable for the infringement”), *aff'd*, 883 F.2d 1026 (Fed. Cir. 1989); *Shields v. Halliburton Co.*, 493 F. Supp. 1376, 1389 (W.D. La. 1980) (“When infringement results from the participation and combined action of several parties, they are all joint infringers and jointly liable for patent infringements. . . . Infringement of a patented process or method cannot be avoided by having another perform one step of the process or method”) (citation omitted), *aff'd*, 667 F.2d 1232 (5th Cir. 1982).

This Court, in *On Demand Mach. Corp. v. Ingram Indus., Inc.*, 442 F.3d 1331, 1344-45 (Fed. Cir. 2006), approved a jury instruction that the participa-

tion and combined actions of two separate entities could demonstrate joint direct method claim infringement.³

VI. THE ORIGINS OF THE “SINGLE ENTITY” RULE

To the extent that panel opinions of this Court subsequent to *On Demand* have radically departed from long-settled precedent, such decisions failed to analyze joint infringement by applying the historic tort principles that have traditionally been applied, *inter alia*, in patent cases. For example, while *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1380 (Fed. Cir. 2007), held that the defendant could not be liable for direct infringement because it did not perform all of the claimed method steps, it did so based on *Fromson v. Advance Offset Plate, Inc.*, 720 F.2d 1565, 1568 (Fed. Cir. 1983), and *Cross Med. Prods., Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1311 (Fed. Cir. 2005).

In *Fromson*, the Federal Circuit held that a finding of no infringement was based on an erroneous claim construction and remanded the case for further

³ The jury instruction was: “It is not necessary for the acts that constitute infringement to be performed by one person or entity. When infringement results from the participation and combined action(s) of more than one person or entity, they are all joint infringers and jointly liable for patent infringement. Infringement of a patented process or method cannot be avoided by having another perform one step of the process or method. Where the infringement is the result of the participation and combined action(s) of one or more persons or entities, they are joint infringers and are jointly liable for the infringement.” *Id.* The Federal Circuit “discern[ed] no flaw in this instruction as a statement of law.” *Id.* at 1345.

consideration. 720 F.2d at 1571. A comment in the opinion that the defendant could not be liable for direct infringement (but could be liable for contributory infringement) where its customers performed one of the claimed steps was mere dicta, providing no analysis of the joint tortfeasor issue and lacking citation to any authority. *Id.* at 1568. *Cross Medical* held that the presence of the defendant's representatives in the operating room advising doctors was insufficient to attribute the doctors' conduct to the defendant for Section 271(a) purposes. 424 F.3d at 1310-11. However, this decision provided no analysis and cited no authority. *Id.* at 1311.

VII. THIS COURT SHOULD RETURN TO PROPER INFRINGEMENT ANALYSIS

The proper infringement analysis should therefore be to: (1) determine whether an unauthorized use of the claimed invention occurred through performance of all claimed elements, and (2) analyze whether one or more of the actors involved in creating that harm may be fairly held liable for it.

Under this approach, the first question is the basic one: has every element of the patent claim been practiced? Only after establishing that harm to the patentee has occurred, the next question proceeds in two steps: (a) who participated in causing that harm, and (b) was that participation substantial enough to fairly hold that actor liable for the harm caused?

This analytical framework subsumes not only single-actor and actor-agent infringements, but other situations, as in the case at bar, where several actors together produce the infringing harm and at least one of them has had such a substantial involvement in orchestrating the actions that it fairly should be held liable. This analysis also protects innocent actors from liability – such as members of the public who merely log onto a website and click a mouse on a map – and instead looks to the principal actor(s) for liability.

As applied in the Section 271(a) context, these common law principles ensure that unwitting actors are not held liable. Only those entities who direct or control others or know that each step of the patented method will be performed through their concerted action will be liable based on the totality of the acts performed in concert. The common law approach, as applied to Section 271(a), protects those who do not know that a patented method is being performed.⁴

⁴ This does not mean that direct infringement acquires an intent element. Rather, knowledge is the common law's test for determining whether a defendant is responsible for the acts of others combined with its own acts. Once that knowledge is shown, then the combined conduct is evaluated for its tortious character – which, in the case of infringement under Section 271(a), is done by comparing the accused conduct to the asserted patent claims on a strict liability basis. *See Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S. Ct. 2060, 2065 n.2 (2011).

**VIII. RECOGNIZING JOINT LIABILITY UNDER SECTION 271(a)
FURTHERS THE PATENT ACT'S PURPOSES; A RIGID
“SINGLE ENTITY” RULE DOES NOT**

Beyond its inconsistency with the Patent Act’s text and common law principles, the “single entity” rule undermines the very purpose of the Patent Act, as it encourages and rewards MOVE’s gamesmanship with no concomitant benefit to either the patent owner or to the public.

Under the Federal Circuit’s current Section 271(a) jurisprudence, parties seeking to infringe on another’s patented method may design a commercial relationship in which one delegates some steps of the method, as long as the actors performing the delegated steps are not in a formal agency relationship with one another and their scheme is not memorialized as an unconditional contractual obligation. This Court has acknowledged that the “single entity” rule will encourage multiple parties engaged in ““armslength cooperation”” “to perform every step of a claimed method” to avoid liability. *Muniauction*, 532 F.3d at 1329 (citation omitted). Following *Muniauction*, this Court approved a judgment of no liability in a case in which a ““strategic partnership”” existed and the partners ““collaborated to sell . . . two programs as a unit” that, in combination, practiced all steps of a patented method. *Golden Hour Data Sys., Inc. v. emsCharts, Inc.*, 614 F.3d 1367, 1371 (Fed. Cir. 2010).

The result of the “single entity” rule is accordingly that, as in the case at bar, method patents may be practiced with impunity by multiple parties acting in concert – a situation that utterly devalues method claims to otherwise important and valuable inventions that deserve the full protection of the Patent Act. Here, one party, MOVE, designed its host computer system to instruct users to position a mouse and click an on-screen control that caused the host computer to select the area having boundaries. In so-doing, a claim step was caused to occur, and every element of the claimed method thereby performed, but not by a “single entity” under the ruling in *Muniauction*.

This Court can and should correct the “single entity” rule. That rule is not the product of legislative judgment, or in accord with long-settled principles of common law, but of an erroneous, recent, and harmful interpretation of Section 271(a) by individual panels of the Federal Circuit. This Court, sitting *en banc*, has not hesitated to correct such errors in the past. It should do so now.

CONCLUSION

The overly-restrictive “single entity” rule enunciated by this Court in *Muniauction* has no basis in the text or legislative history of the 1952 Patent Act, and this Court should return to the prior standard long-employed in addressing infringement by joint tortfeasors: that of action in concert. Only in this way can

the value of method patents be safeguarded from multiple actors seeking to “game” the system to avoid findings of infringement.

Finally, the granting of summary judgment by the District Court was improper because the District Court stopped its analysis before considering the nature of the several contractual relationships among MOVE and its non-public users whom MOVE admits performed the area selection step. The judgment of the District Court should be reversed, and a finding of infringement under both 35 U.S.C. §§ 271(a) and 271(b) should be entered in REAL’s favor, and the matter remanded for further proceedings consistent with that finding.

Date: September 22, 2014

Respectfully submitted,

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ADDENDUM

ADDENDUM

Pursuant to Fed. Cir. R. 28(a)(12), this Addendum contains the following:

1. Move Inc.'s Status Report and Request for Entry of Final Judgment, dated June 3, 2014 (A1-18)
2. Minute Order, dated June 23, 2014 (A19-20)
3. Minute Order, dated July 28, 2014 (A21)
4. U.S. Patent No. 5,032,989 (A22-43)

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13 **UNITED STATES DISTRICT COURT**
 14 **CENTRAL DISTRICT OF CALIFORNIA**
 15 **WESTERN DIVISION**

16 MOVE, INC., ET AL.,

Case No. 2:07-CV-02185-GHK-(AJWx)

17 Plaintiffs,

Hon. George H. King

18 v.

19 REAL ESTATE ALLIANCE LTD.,
 ET AL.,

**MOVE INC.'S STATUS
 REPORT AND REQUEST FOR
 ENTRY OF FINAL JUDGMENT**

Defendants,

20
 21 REAL ESTATE ALLIANCE LTD.,

Case Filed: Apr. 3, 2007
 2d Am. Complaint Filed: Jan. 12, 2009
 Counterclaims Filed: Feb. 11, 2009

22

Fact Discovery Cutoff: Sept. 25, 2009
 Pretrial Conference: TBD
 Trial: TBD

23 Counterclaim-Plaintiff,

24 v.

25 MOVE, INC., ET AL.,

26 Counterclaim-Defendants.

27
 28 STATUS REPORT AND REQUEST FOR FINAL JUDGMENT

Case 2:07-cv-02185-GHK-AJW Document 521 Filed 06/03/14 Page 2 of 4 Page ID #:19280

1 Pursuant to the Court's Order dated January 31, 2014 (Dkt. No. 520) staying the above-
2 styled case pending a decision by the Supreme Court in *Limelight Networks, Inc. v. Akamai*
3 *Technologies, Inc.* and ordering counsel to "notify the Court within 7 days of the decision by the
4 Supreme Court in *Limelight*," Move hereby notifies the Court that on June 2, 2014, the Supreme
5 Court reversed the decision of the Federal Circuit in *Limelight* and held that an entity cannot be
6 liable for induced infringement under § 271(b) when no one is liable for direct infringement under
7 the Patent Act. A copy of the Supreme Court's opinion is attached as Exhibit 1.

9 In view of the Supreme Court's decision, Move respectfully requests that the Court enter
10 final judgment of non-infringement, since the only issue pending in this case is whether Move can
11 be liable for induced infringement under the now-reversed Federal Circuit *en banc* decision in
12 *Akamai Technologies, Inc. v. Limelight Networks, Inc.*, 692 F.3d 1301, 1309 (Fed. Cir. 2012) (*en*
13 *banc*). Specifically, after this Court entered summary judgment of non-infringement on January
14 26, 2012, the Federal Circuit affirmed the grant of summary judgment of no direct infringement,
15 agreeing with this Court that Move did not perform all steps of the asserted method claims either
16 itself or vicariously through its customers. The Federal Circuit, however, vacated this Court's
17 grant of summary judgment with respect to indirect infringement, remanding the case "for a
18 determination whether Move is liable for indirect infringement under the standard set forth in
19 *Akamai*." (Dkt. No. 511 (Order at 10)). The Supreme Court has now abrogated "the standard set
20 forth in *Akamai*," holding that there can be no liability for induced infringement in the absence of
21 direct infringement. Because the Federal Circuit has already affirmed the finding of no direct
22 infringement by Move, under the Supreme Court's decision, Move cannot be liable for induced
23 infringement. Thus, this Court can, and Move submits should, reinstate its entry of summary
24 judgment of non-infringement and enter final judgment in Move's favor.

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Case 2:07-cv-02185-GHK-AJW Document 521 Filed 06/03/14 Page 3 of 4 Page ID #:19281

1 June 3, 2014

2 Respectfully submitted,

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1 **CERTIFICATE OF SERVICE**
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The undersigned hereby certifies that counsel of record who are deemed to have
consented to electronic service are being served with a copy of this STATUS REPORT via the
Court's CM/ECF system per Local Rule CV-5(a)(3) on June 3, 2014. Any other counsel of
record was served via First Class Mail.

7 */S/ Robin L. McGrath*
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Robin L. McGrath

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EXHIBIT 1

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#:19284

(Slip Opinion)

OCTOBER TERM, 2013

1

Syllabus

NOTE: Where it is feasible, a syllabus (headnote) will be released, as is being done in connection with this case, at the time the opinion is issued. The syllabus constitutes no part of the opinion of the Court but has been prepared by the Reporter of Decisions for the convenience of the reader. See *United States v. Detroit Timber & Lumber Co.*, 200 U. S. 321, 337.

SUPREME COURT OF THE UNITED STATES

Syllabus

LIMELIGHT NETWORKS, INC. v. AKAMAI
TECHNOLOGIES, INC., ET AL.

CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR
THE FEDERAL CIRCUIT

No. 12-786. Argued April 30, 2014—Decided June 2, 2014

Akamai Technologies, Inc., a respondent here, is the exclusive licensee of a patent that claims a method of delivering electronic data using a content delivery network (CDN). Petitioner, Limelight Networks, Inc., also operates a CDN and carries out several of the steps claimed in the patent, but its customers, rather than Limelight itself, perform a step of the patent known as “tagging.” Under Federal Circuit case law, liability for direct infringement under 35 U. S. C. §271(a) requires performance of all steps of a method patent to be attributable to a single party. This position was most recently refined in *Muniauction, Inc. v. Thomson Corp.*, 532 F. 3d 1318. The District Court concluded that Limelight could not have directly infringed the patent at issue because performance of the tagging step could not be attributed to it. The en banc Federal Circuit reversed, holding that a defendant who performed some steps of a method patent and encouraged others to perform the rest could be liable for inducement of infringement even if no one was liable for direct infringement. The en banc court concluded that the evidence could support liability for Limelight on an inducement theory and remanded for further proceedings.

Held: A defendant is not liable for inducing infringement under §271(b) when no one has directly infringed under §271(a) or any other statutory provision. Pp. 4–11.

(a) Liability for inducement must be predicated on direct infringement. *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U. S. 336, 341. Assuming that *Muniauction*’s holding is correct, respondents’ method has not been infringed because the performance of all of its steps is not attributable to any one person. Since direct infringe-

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Syllabus

ment has not occurred, there can be no inducement of infringement under §271(b). The Federal Circuit's contrary view would deprive §271(b) of ascertainable standards and require the courts to develop two parallel bodies of infringement law. This Court's reading of §271(b) is reinforced by §271(f)(1), which illustrates that Congress knows how to impose inducement liability predicated on non-infringing conduct when it wishes to do so. The notion that conduct which would be infringing in altered circumstances can form the basis for contributory infringement has been rejected, see *Deepsouth Packing Co. v. Laitram Corp.*, 406 U. S. 518, 526–527, and there is no reason to apply a different rule for inducement. Pp. 4–7.

(b) Respondents claim that principles from tort law and criminal aiding and abetting doctrine, as well as patent law principles in existence before the 1952 Patent Act, support the Federal Circuit's reading of the statute, but their arguments are unpersuasive. Though a would-be infringer could evade liability by dividing performance of a method patent's steps with another whose conduct cannot be attributed to the defendant, this is merely a result of the Federal Circuit's interpretation of §271(a), and a desire to avoid this consequence does not justify fundamentally altering the rules of inducement liability clearly required by the Patent Act's text and structure. Pp. 8–10.

(c) Because the question presented here is clearly focused on §271(b) and presupposes that Limelight has not committed direct infringement under §271(a), the Court declines to address whether the Federal Circuit's decision in *Muniauction* is correct. P. 10.

692 F. 3d 1301, reversed and remanded.

ALITO, J., delivered the opinion for a unanimous Court.

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Cite as: 572 U. S. ____ (2014)

1

Opinion of the Court

NOTICE: This opinion is subject to formal revision before publication in the preliminary print of the United States Reports. Readers are requested to notify the Reporter of Decisions, Supreme Court of the United States, Washington, D. C. 20543, of any typographical or other formal errors, in order that corrections may be made before the preliminary print goes to press.

SUPREME COURT OF THE UNITED STATES

No. 12-786

LIMELIGHT NETWORKS, INC., PETITIONER *v.*
AKAMAI TECHNOLOGIES, INC., ET AL.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF
APPEALS FOR THE FEDERAL CIRCUIT

[June 2, 2014]

JUSTICE ALITO delivered the opinion of the Court.

This case presents the question whether a defendant may be liable for inducing infringement of a patent under 35 U. S. C. §271(b) when no one has directly infringed the patent under §271(a) or any other statutory provision. The statutory text and structure and our prior case law require that we answer this question in the negative. We accordingly reverse the Federal Circuit, which reached the opposite conclusion.

I
A

Respondent the Massachusetts Institute of Technology is the assignee of U. S. Patent No. 6,108,703 ('703 patent), which claims a method of delivering electronic data using a "content delivery network," or "CDN." Respondent Akamai Technologies, Inc., is the exclusive licensee. Akamai maintains many servers distributed in various locations. Proprietors of Web sites, known as "content providers," contract with Akamai to deliver their Web sites' content to individual Internet users. The '703 patent provides for the designation of certain components of a

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content provider's Web site (often large files, such as video or music files) to be stored on Akamai's servers and accessed from those servers by Internet users. The process of designating components to be stored on Akamai's servers is known as "tagging." By "aggregat[ing] the data demands of multiple content providers with differing peak usage patterns and serv[ing] that content from multiple servers in multiple locations," 614 F. Supp. 2d 90, 96 (Mass. 2009), as well as by delivering content from servers located in the same geographic area as the users who are attempting to access it, Akamai is able to increase the speed with which Internet users access the content of its customers' Web sites.

Petitioner Limelight Networks, Inc., also operates a CDN and carries out several of the steps claimed in the '703 patent. But instead of tagging those components of its customers' Web sites that it intends to store on its servers (a step included in the '703 patent), Limelight requires its customers to do their own tagging.¹ Respondents claim that Limelight "provides instructions and offers technical assistance" to its customers regarding how to tag, 629 F. 3d 1311, 1321 (CA Fed. 2010), but the record is undisputed that Limelight does not tag the components to be stored on its servers.

B

In 2006, respondents sued Limelight in the United States District Court for the District of Massachusetts, claiming patent infringement. The case was tried to a jury, which found that Limelight had committed infringement and awarded more than \$40 million in damages.

Respondents' victory was short-lived, however. After

¹In its brief, Limelight disputes whether its customers actually "tag" within the meaning of the patent. Brief for Petitioner 7, n. 4. We assume *arguendo* that Limelight's customers do in fact "tag" within the patent's meaning.

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Opinion of the Court

the jury returned its verdict, the Federal Circuit decided *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318 (2008). In that case the Court of Appeals rejected a claim that the defendant's method, involving bidding on financial instruments using a computer system, directly infringed the plaintiff's patent. The defendant performed some of the steps of the patented method, and its customers, to whom the defendant gave access to its system along with instructions on the use of the system, performed the remaining steps. The court started from "the proposition that direct infringement requires a single party to perform every step of a claimed method." *Id.*, at 1329. This requirement is satisfied even though the steps are actually undertaken by multiple parties, the court explained, if a single defendant "exercises 'control or direction' over the entire process such that every step is attributable to the controlling party." *Ibid.* The court held that the defendant in *Muniauction* was not liable for direct infringement because it did not exercise control or direction over its customers' performance of those steps of the patent that the defendant itself did not perform. *Id.*, at 1330.

In light of *Muniauction*, Limelight moved for reconsideration of its earlier motion for judgment as a matter of law, which the District Court had denied. The District Court granted the motion, concluding that *Muniauction* precluded a finding of direct infringement under §271(a) because infringement of the '703 patent required tagging and Limelight does not control or direct its customers' tagging. A panel of the Federal Circuit affirmed, explaining that a defendant that does not itself undertake all of a patent's steps can be liable for direct infringement only "when there is an agency relationship between the parties who perform the method steps or when one party is contractually obligated to the other to perform the steps." 629 F.3d, at 1320. Since neither of these conditions was met in the present case, the Federal Circuit panel held that

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Limelight could not be held liable for direct infringement.²
Ibid.

The Federal Circuit granted en banc review and reversed. The en banc court found it unnecessary to revisit its §271(a) direct infringement case law. Instead, it concluded that the “evidence could support a judgment in [respondents’] favor on a theory of induced infringement” under §271(b). 692 F. 3d 1301, 1319 (2012) (*per curiam*). This was true, the court explained, because §271(b) liability arises when a defendant carries out some steps constituting a method patent and encourages others to carry out the remaining steps—even if no one would be liable as a direct infringer in such circumstances, because those who performed the remaining steps did not act as agents of, or under the direction or control of, the defendant. The Court of Appeals did not dispute that “there can be no indirect infringement without direct infringement,” *id.*, at 1308, but it explained that “[r]equiring proof that there has been direct infringement . . . is not the same as requiring proof that a single party would be liable as a direct infringer,” *id.*, at 1308–1309 (emphasis deleted). Judge Newman and Judge Linn both dissented (with the latter joined by Judges Dyk, Prost, and O’Malley).

Limelight sought certiorari, which we granted. 571 U. S. ____ (2014).

II
A

Neither the Federal Circuit, see 692 F. 3d, at 1308, nor respondents, see Tr. of Oral Arg. 44, dispute the proposition that liability for inducement must be predicated on

²The panel noted that Limelight’s contracts instruct its customers to tag the components they wish to be stored on Limelight’s CDN, but concluded that, because these contracts did not give Limelight control over its customers, the customers’ tagging could not be attributed to Limelight. See 629 F. 3d, at 1321.

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direct infringement. This is for good reason, as our case law leaves no doubt that inducement liability may arise “if, but only if, [there is] . . . direct infringement.” *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U. S. 336, 341 (1961) (emphasis deleted).³

One might think that this simple truth is enough to dispose of this appeal. But the Federal Circuit reasoned that a defendant can be liable for inducing infringement under §271(b) even if no one has committed direct infringement within the terms of §271(a) (or any other provision of the patent laws), because direct infringement can exist independently of a violation of these statutory provisions. See 692 F. 3d, at 1314.

The Federal Circuit’s analysis fundamentally misunderstands what it means to infringe a method patent. A method patent claims a number of steps; under this Court’s case law, the patent is not infringed unless all the steps are carried out. See, e.g., *Aro, supra*, at 344 (a “patent covers only the totality of the elements in the claim and . . . no element, separately viewed, is within the grant”). This principle follows ineluctably from what a patent is: the conferral of rights in a particular claimed set of elements. “Each element contained in a patent claim is deemed material to defining the scope of the patented invention,” *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U. S. 17, 29 (1997), and a patentee’s rights extend only to the claimed combination of elements, and no further.

The Federal Circuit held in *Muniauction* that a method’s steps have not all been performed as claimed by the patent unless they are all attributable to the same de-

³*Aro* addressed contributory infringement under §271(c), rather than inducement of infringement under §271(b), but we see no basis to distinguish for these purposes between the two, which after all spring from common stock. See *Global-Tech Appliances, Inc. v. SEB S. A.*, 563 U. S. ___, ___ (2011) (slip op., at 8).

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fendant, either because the defendant actually performed those steps or because he directed or controlled others who performed them. See 532 F. 3d, at 1329–1330. Assuming without deciding that the Federal Circuit’s holding in *Muniauction* is correct, there has simply been no infringement of the method in which respondents have staked out an interest, because the performance of all the patent’s steps is not attributable to any one person. And, as both the Federal Circuit and respondents admit, where there has been no direct infringement, there can be no inducement of infringement under §271(b).

The Federal Circuit’s contrary view would deprive §271(b) of ascertainable standards. If a defendant can be held liable under §271(b) for inducing conduct that does not constitute infringement, then how can a court assess when a patent holder’s rights have been invaded? What if a defendant pays another to perform just one step of a 12-step process, and no one performs the other steps, but that one step can be viewed as the most important step in the process? In that case the defendant has not encouraged infringement, but no principled reason prevents him from being held liable for inducement under the Federal Circuit’s reasoning, which permits inducement liability when fewer than all of a method’s steps have been performed within the meaning of the patent. The decision below would require the courts to develop two parallel bodies of infringement law: one for liability for direct infringement, and one for liability for inducement.

Section 271(f)(1) reinforces our reading of §271(b). That subsection imposes liability on a party who “supplies or causes to be supplied in or from the United States all or a substantial portion of the components of a patented invention . . . in such manner as to actively induce the combination of such components outside of the United States in a manner that would infringe the patent *if such combination occurred within the United States*” (emphasis added). As

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this provision illustrates, when Congress wishes to impose liability for inducing activity that does not itself constitute direct infringement, it knows precisely how to do so. The courts should not create liability for inducement of non-infringing conduct where Congress has elected not to extend that concept.

The Federal Circuit seems to have adopted the view that Limelight induced infringement on the theory that the steps that Limelight and its customers perform would infringe the '703 patent if all the steps were performed by the same person. But we have already rejected the notion that conduct which would be infringing in altered circumstances can form the basis for contributory infringement, and we see no reason to apply a different rule for inducement. In *Deepsouth Packing Co. v. Laitram Corp.*, 406 U. S. 518 (1972), a manufacturer produced components of a patented machine and then exported those components overseas to be assembled by its foreign customers.⁴ (The assembly by the foreign customers did not violate U. S. patent laws.) In both *Deepsouth* and this case, the conduct that the defendant induced or contributed to would have been infringing if committed in altered circumstances: in *Deepsouth* if the machines had been assembled in the United States, see *id.*, at 526, and in this case if performance of all of the claimed steps had been attributable to the same person. In *Deepsouth*, we rejected the possibility of contributory infringement because the machines had not been assembled in the United States, and direct infringement had consequently never occurred. See *id.*, at 526–527. Similarly, in this case, performance of all the claimed steps cannot be attributed to a single person, so direct infringement never occurred. Limelight cannot be liable for inducing infringement that never came to pass.

⁴Section 271(f) now prohibits the exporter's conduct at issue in *Deepsouth*.

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B

Respondents' arguments in support of the Federal Circuit's reading of the statute are unpersuasive. First, respondents note that tort law imposes liability on a defendant who harms another through a third party, even if that third party would not himself be liable, and respondents contend that, given the background tort principles against which the Patent Act of 1952 was enacted, it should not matter that no one is liable for direct infringement in this case. But the reason Limelight could not have induced infringement under §271(b) is not that no third party is *liable* for direct infringement; the problem, instead, is that no direct infringement was *committed*. *Muniauction* (which, again, we assume to be correct) instructs that a method patent is not directly infringed—and the patentee's interest is thus not violated—unless a single actor can be held responsible for the performance of all steps of the patent. Because Limelight did not undertake all steps of the '703 patent and cannot otherwise be held responsible for all those steps, respondents' rights have not been violated. Unsurprisingly, respondents point us to no tort case in which liability was imposed because a defendant caused an innocent third party to undertake action that did not violate the plaintiff's legal rights.

In a related argument, respondents contend that, at tort, liability sometimes attaches where two or more defendants inflict injury, even if each defendant's conduct, standing alone, would not be actionable. See W. Keeton, D. Dobbs, R. Keeton, & D. Owen, *Prosser and Keeton on Torts* §52, p. 354 (5th ed. 1984) (multiple defendants who each add negligible impurities to stream liable if aggregate impurities cause harm). But the rationale for imposing liability in these circumstances is that the defendants collectively invaded the plaintiff's protected interests. See *ibid.* By contrast, under the *Muniauction* rule, respondents' interests in the '713 patent have not been invaded.

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Second, respondents seek to analogize §271(b) to the federal aiding and abetting statute, 18 U. S. C. §2, and they argue that two parties who divide all the necessary elements of a crime between them are both guilty under §2. The analogy does not hold up. The aiding and abetting statute must be read “against its common-law background,” *Standefer v. United States*, 447 U. S. 10, 19 (1980), and at common law two or more defendants, each of whom committed an element of a crime, were liable as principals. See, e.g., 1 J. Bishop, *Commentaries on the Criminal Law* §649, p. 392 (7th ed. 1882). While we have drawn on criminal law concepts in the past in interpreting §271(b), see *Global-Tech Appliances, Inc. v. SEB S. A.*, 563 U. S. ___, ___ (2011) (slip op., at 10–12), we think it unlikely that Congress had this particular doctrine in mind when it enacted the Patent Act of 1952, given the doctrine’s inconsistency with the Act’s cornerstone principle that patentees have a right only to the set of elements claimed in their patents and nothing further.

Third, respondents contend that patent law principles established before the enactment of the Patent Act demonstrate that a defendant that performs some steps of a patent with the purpose of having its customers perform the remaining steps is liable for inducing infringement. But here, too, the nature of the rights created by the Patent Act defeats the notion that Congress could have intended to permit inducement liability where there is no underlying direct infringement. According to respondents, their understanding of the pre-1952 doctrine casts doubt on the *Muniauction* rule for direct infringement under §271(a), on the ground that that rule has the indirect effect of preventing inducement liability where Congress would have wanted it. But the possibility that the Federal Circuit erred by too narrowly circumscribing the scope of §271(a) is no reason for this Court to err a second time by misconstruing §271(b) to impose liability for inducing

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LIMELIGHT NETWORKS, INC. v. AKAMAI
TECHNOLOGIES, INC.
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infringement where no infringement has occurred.

Finally, respondents, like the Federal Circuit, criticize our interpretation of §271(b) as permitting a would-be infringer to evade liability by dividing performance of a method patent's steps with another whom the defendant neither directs nor controls. We acknowledge this concern. Any such anomaly, however, would result from the Federal Circuit's interpretation of §271(a) in *Muniauction*. A desire to avoid *Muniauction*'s natural consequences does not justify fundamentally altering the rules of inducement liability that the text and structure of the Patent Act clearly require—an alteration that would result in its own serious and problematic consequences, namely, creating for §271(b) purposes some free-floating concept of "infringement" both untethered to the statutory text and difficult for the lower courts to apply consistently.

III

Respondents ask us to review the merits of the Federal Circuit's *Muniauction* rule for direct infringement under §271(a). We decline to do so today.

In the first place, the question presented is clearly focused on §271(b), not §271(a). We granted certiorari on the following question: "Whether the Federal Circuit erred in holding that a defendant may be held liable for inducing patent infringement under 35 U. S. C. §271(b) even though no one has committed direct infringement under §271(a)." Pet. for Cert. i. The question presupposes that Limelight has not committed direct infringement under §271(a). And since the question on which we granted certiorari did not involve §271(a), petitioner did not address that important issue in its opening brief. Our decision on the §271(b) question necessitates a remand to the Federal Circuit, and on remand, the Federal Circuit will have the opportunity to revisit the §271(a) question if it so chooses.

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IV

The judgment below is reversed, and the case is remanded for further proceedings consistent with this opinion.

It is so ordered.

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E-FILEDUNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA**CIVIL MINUTES - GENERAL**

Case No.	CV 07-2185-GHK (AJWx)	Date	June 23, 2014
Title	<i>Move, Inc., et al. v. Real Estate Alliance Ltd., et al.</i>		

Presiding: The Honorable**GEORGE H. KING, CHIEF U. S. DISTRICT JUDGE**

Beatrice Herrera	N/A	N/A
Deputy Clerk	Court Reporter / Recorder	Tape No.

Attorneys Present for Plaintiff:

None

Attorneys Present for Defendants:

None

Proceedings: **(In Chambers) Order re:** Move Inc.'s Status Report and Request for Entry of Final Judgment (Dkt. 521)

On January 26, 2012, we granted summary judgment in favor of Plaintiffs Move, Inc.; National Association of Realtors; and National Association of Home Builders (collectively "Move") on their claim of noninfringement of Defendant Real Estate Alliance Ltd.'s ("REAL") '989 Patent, and dismissed Claims I-III of REAL's Counterclaim. (Dkt. 493.) On June 20, 2013, the Federal Circuit affirmed our decision with respect to direct infringement. *Move, Inc. v. Real Estate Alliance, Ltd.*, 709 F.3d 1117, 1121-22 (Fed. Cir. 2013). However, after we issued our summary judgment order, the Federal Circuit issued its *en banc* opinion in *Akamai Technologies, Inc. v. Limelight Networks, Inc.*, 692 F.3d 1301 (Fed. Cir. 2012), *rev'd*, 134 S. Ct. 2111 (2014), in which it held that a party can be liable for induced infringement under 35 U.S.C. § 271(b) even if no single entity would be liable as a direct infringer. *Id.* at 1308-09. Accordingly, although we followed then-existing precedent, the Federal Circuit vacated our grant of summary judgment and remanded the case to us to determine "whether Move is liable for indirect infringement under the standard set forth in *Akamai*." *Move, Inc.*, 709 F.3d at 1123. On August 19, 2013, we stayed this case pending the Supreme Court's review of *Akamai*. On June 2, 2014, the Supreme Court reversed the Federal Circuit's decision in *Akamai*, holding that an entity cannot be liable for induced infringement under § 271(b) when no one is liable for direct infringement under § 271(a). *Limelight*, 134 S. Ct. at 2117-20.

Based on the Supreme Court's decision in *Limelight*, the Federal Circuit mandate has been totally undermined. Because the Federal Circuit's decision in *Akamai* is no longer good law, it appears that no further proceedings are necessary. On June 3, 2014, Move filed a Status Report, requesting that, in light of *Limelight*, we reinstate our entry of summary judgment of noninfringement and enter final judgment in Move's favor. Twenty days have passed since Move filed its Status Report, and REAL has not filed any response or objection. Accordingly, we now reinstate our grant of summary judgment of noninfringement in favor of Move. In light of the foregoing, the Parties **SHALL** file a status report **within 10 days hereof**, identifying the issues, if any, that remain with respect to Phase 1 and Phase 2 of this litigation. If the Parties fail to identify any remaining issues in their Status Report, it will be

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E-FILED

UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA

CIVIL MINUTES - GENERAL

Case No.	CV 07-2185-GHK (AJWx)	Date	June 23, 2014
Title	<i>Move, Inc., et al. v. Real Estate Alliance Ltd., et al.</i>		

deemed their consent to dismissal of any other claims in this action. Thereafter, we will issue such orders as may be appropriate.

IT IS SO ORDERED.

_____- : _____-

Initials of Deputy Clerk

Bea

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E-FILED

UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA

CIVIL MINUTES - GENERAL

Case No.	CV 07-2185-GHK (AJWx)	Date	July 28, 2014
Title	<i>Move, Inc., et al. v. Real Estate Alliance Ltd., et al.</i>		

Presiding: The Honorable

GEORGE H. KING, CHIEF U. S. DISTRICT JUDGE

Beatrice Herrera	N/A	N/A
Deputy Clerk	Court Reporter / Recorder	Tape No.

Attorneys Present for Plaintiff:

None

Attorneys Present for Defendants:

None

Proceedings: (In Chambers) Order Staying Case

We have considered the Parties' status reports on what remains at issue in Phase 1 and Phase 2 of this litigation. In light of Defendants' appeal to the Federal Circuit of our final judgment of noninfringement and our prior order staying Phase 2 of the litigation until a final determination in Phase 1, this matter is hereby **STAYED** pending final decision on Defendants' appeal.

IT IS SO ORDERED.

Initials of Deputy Clerk

Bea

United States Patent [19]

Tornetta

[11] Patent Number: 5,032,989

[45] Date of Patent: Jul. 16, 1991

[54] REAL ESTATE SEARCH AND LOCATION SYSTEM AND METHOD

Computer Shopper, vol. 8, No. 12, Dec. 1988, p. 609 (abstract only).

[75] Inventor: Mark A. Tornetta, Plymouth Meeting, Pa.

"Once-ailing Mindbank Rebounds With New Real Estate Package", *Pittsburgh Press (PA)*, May 24, p. D9 (abstract only).

[73] Assignee: Realpro, Ltd., Plymouth Meeting, Pa.

"System Technology Develops CD-ROM Map Display System", *Comline Computers*, Aug. 23, 1989, p. 3 (abstract only).

[21] Appl. No.: 342,577

"Meitei Develops Network System Connecting Map Information System with ISDN", *Comline Telecommunications*, Nov. 8, 1989, p. 4.

[22] Filed: Apr. 24, 1989

"New MAPINFO 4.0: Desktop Mapping on Network", PTS New Product Announcements, News Release May 10, 1990, p. 1.

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 841,515, Mar. 19, 1986, Pat. No. 4,870,576.

"Graphic Real Estate", *Varbusiness*, Oct. 1990, p. 16.

[51] Int. Cl. 5 G06F 15/21

Primary Examiner—Jerry Smith

[52] U.S. Cl. 364/401; 340/731

Assistant Examiner—David Huntley

[58] Field of Search 364/401; 340/731, 995;

Attorney, Agent, or Firm—Ratner & Prestia

434/150

[56] References Cited

[57] ABSTRACT

U.S. PATENT DOCUMENTS

There is provided a method for locating available real estate properties for sale, lease or rental using a database of available properties at a central location and remote stations which use a graphic interface to select desired regions on a map of the areas in interest. The user begins with a region where they are interested in acquiring property and select an inner area within this region by using a pointing device such as a mouse to designate boundaries on a map displayed on screen. This is then zoomed in on and a second area is selected within the zoomed region. The second area is then cross-referenced with the database of available properties whose approximate locations are then pictorially displayed on screen. Information about the properties can then be obtained in textual form.

FOREIGN PATENT DOCUMENTS

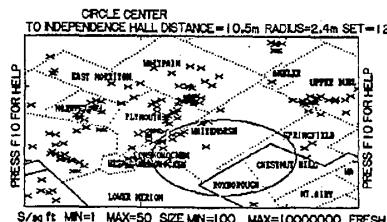
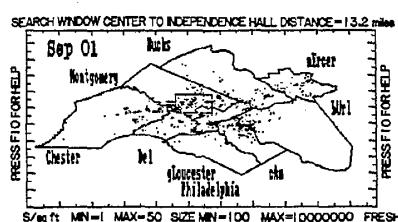
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"Digitizer Option Introduced With StreetSmart 3.0",

12 Claims, 13 Drawing Sheets



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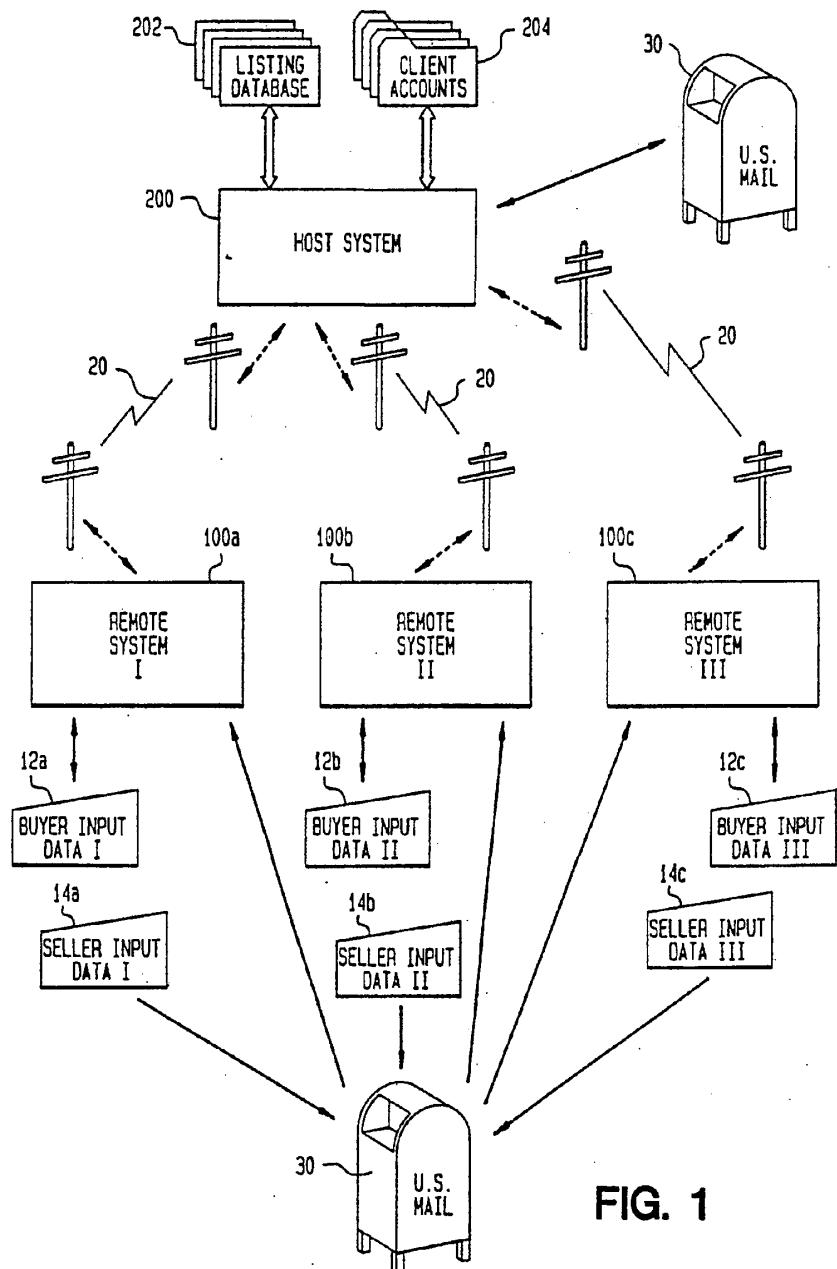


FIG. 1

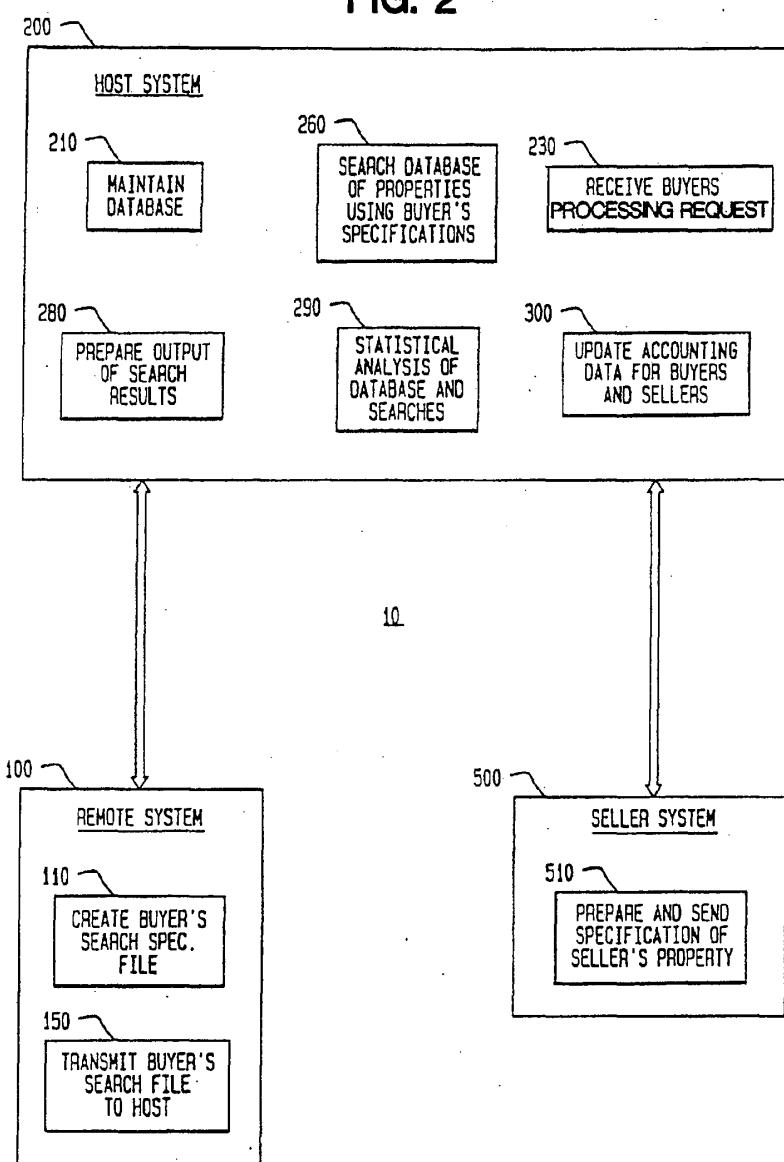
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FIG. 2



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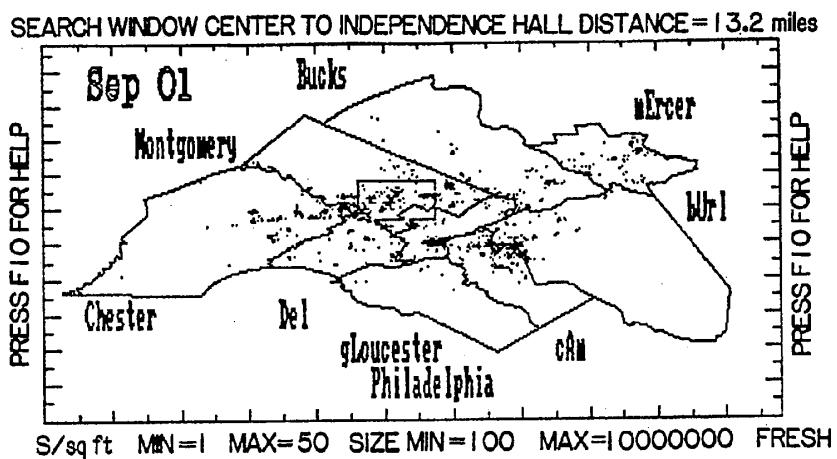


FIG. 3A

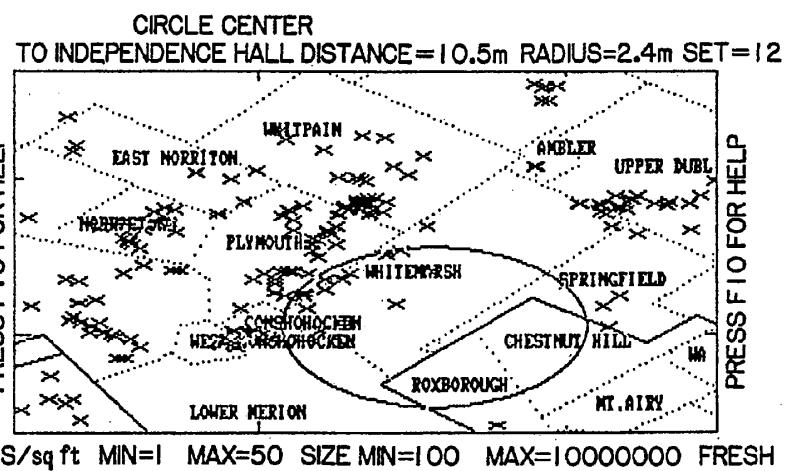


FIG. 3B

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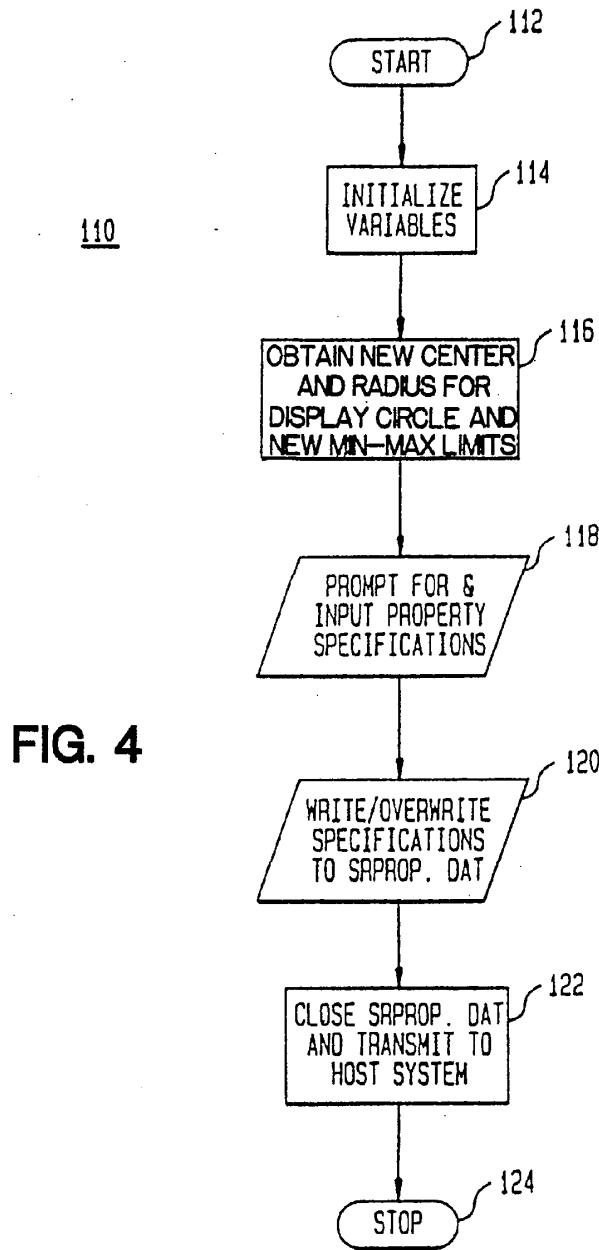


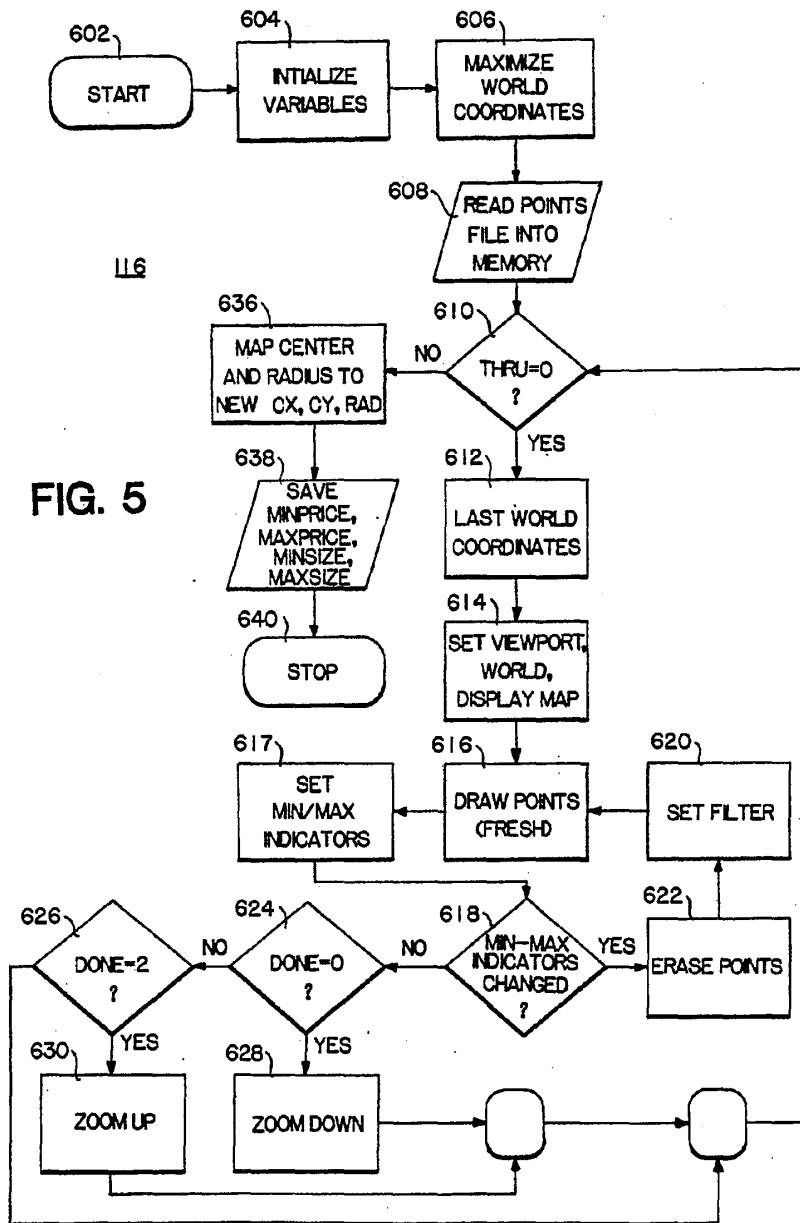
FIG. 4

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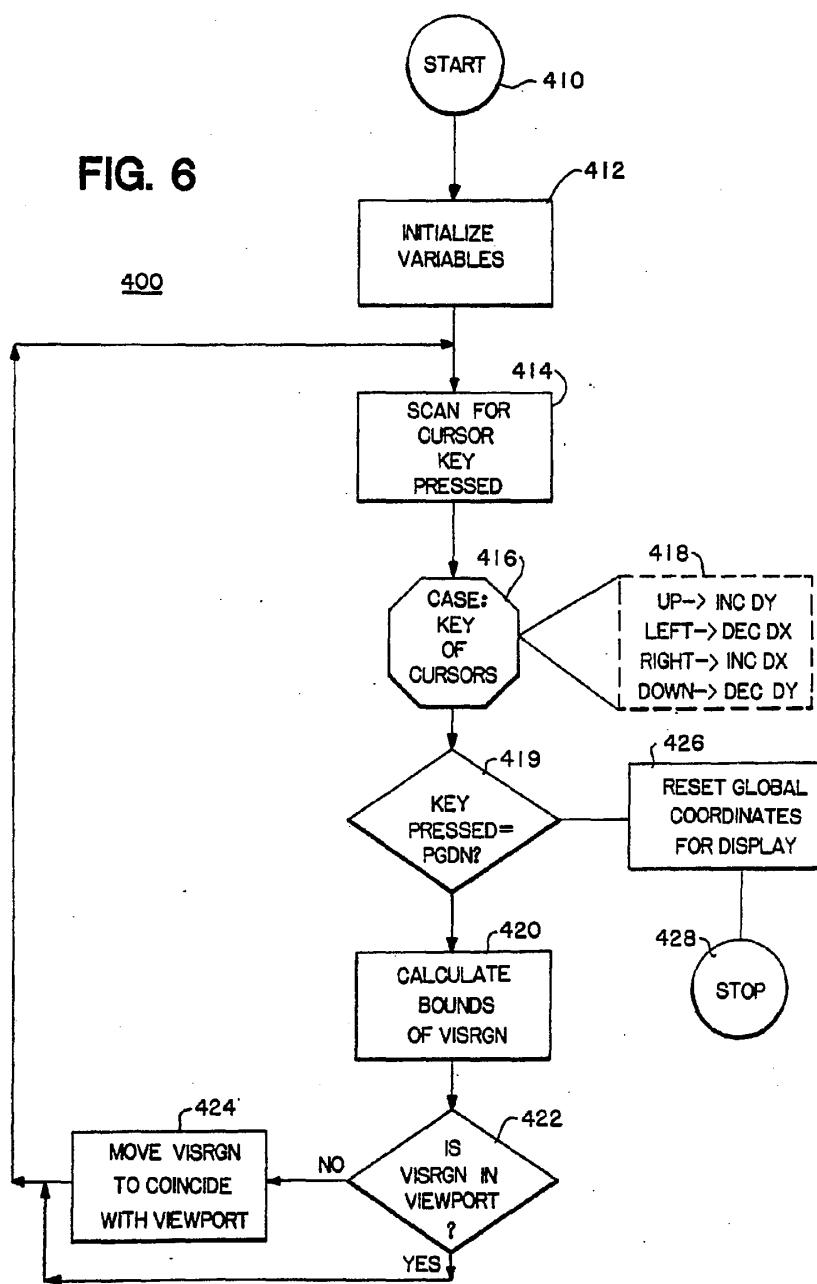
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FIG. 6



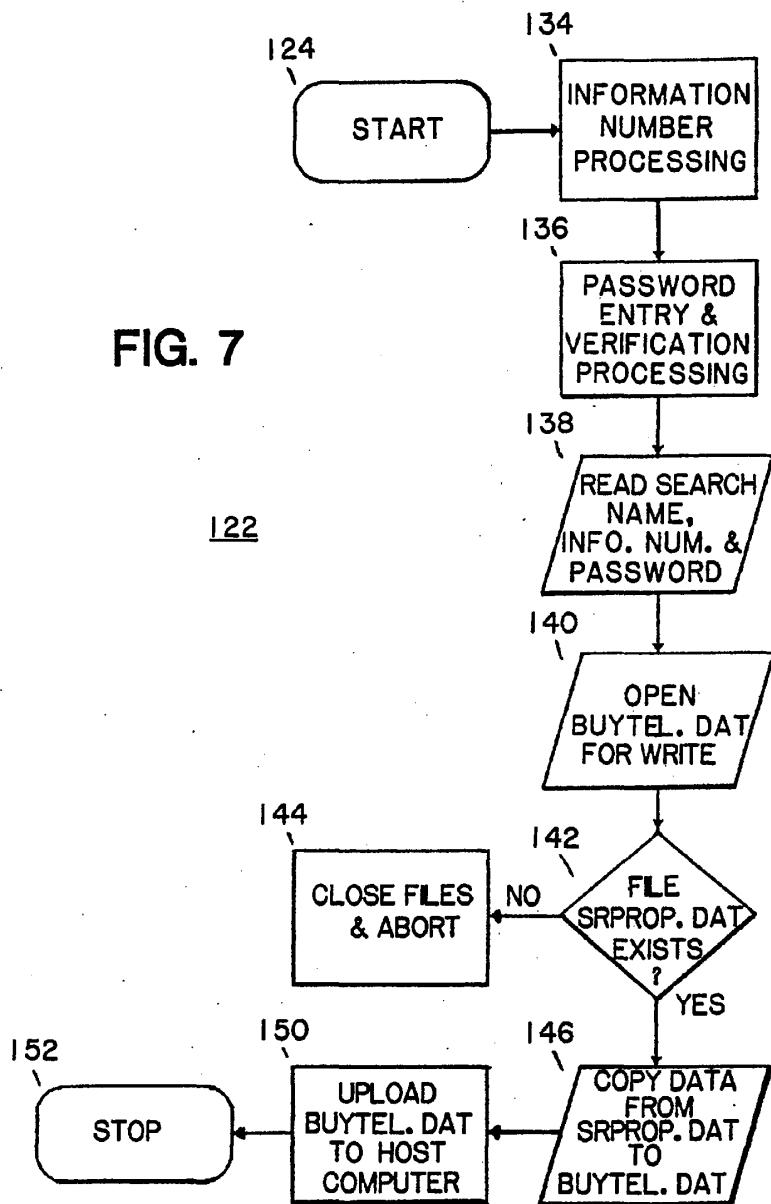
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FIG. 7

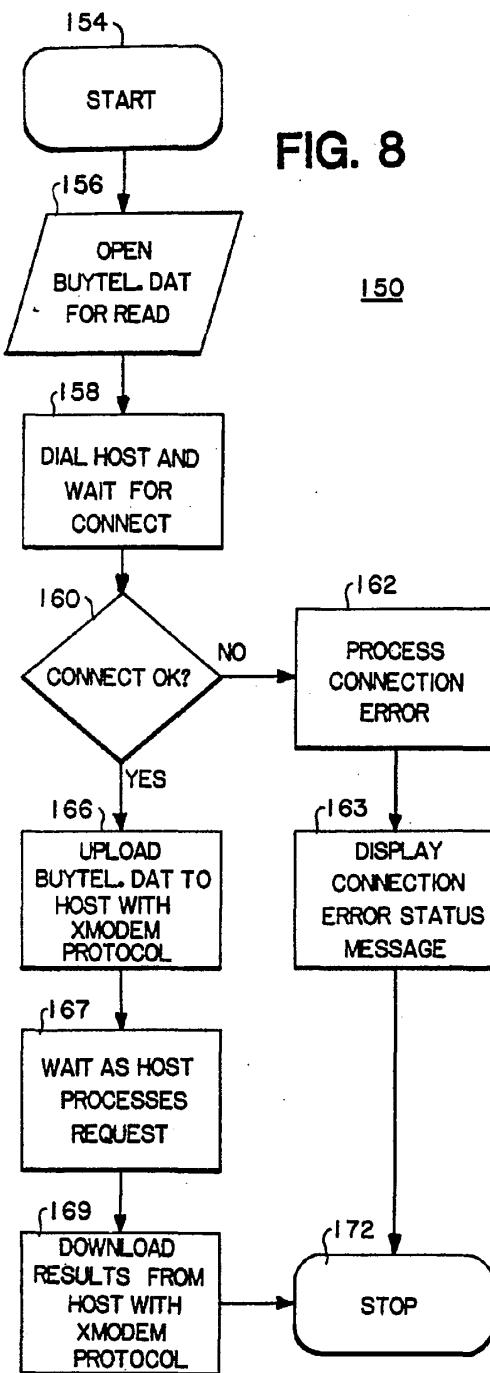


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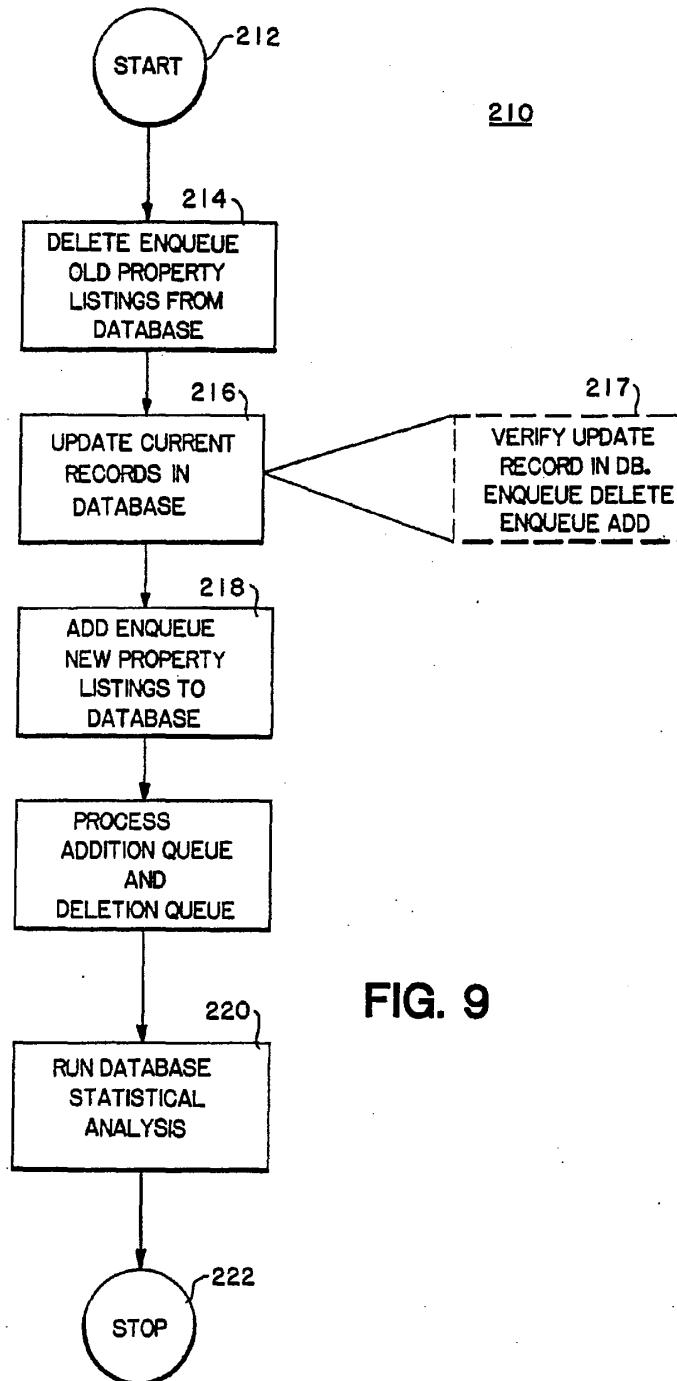


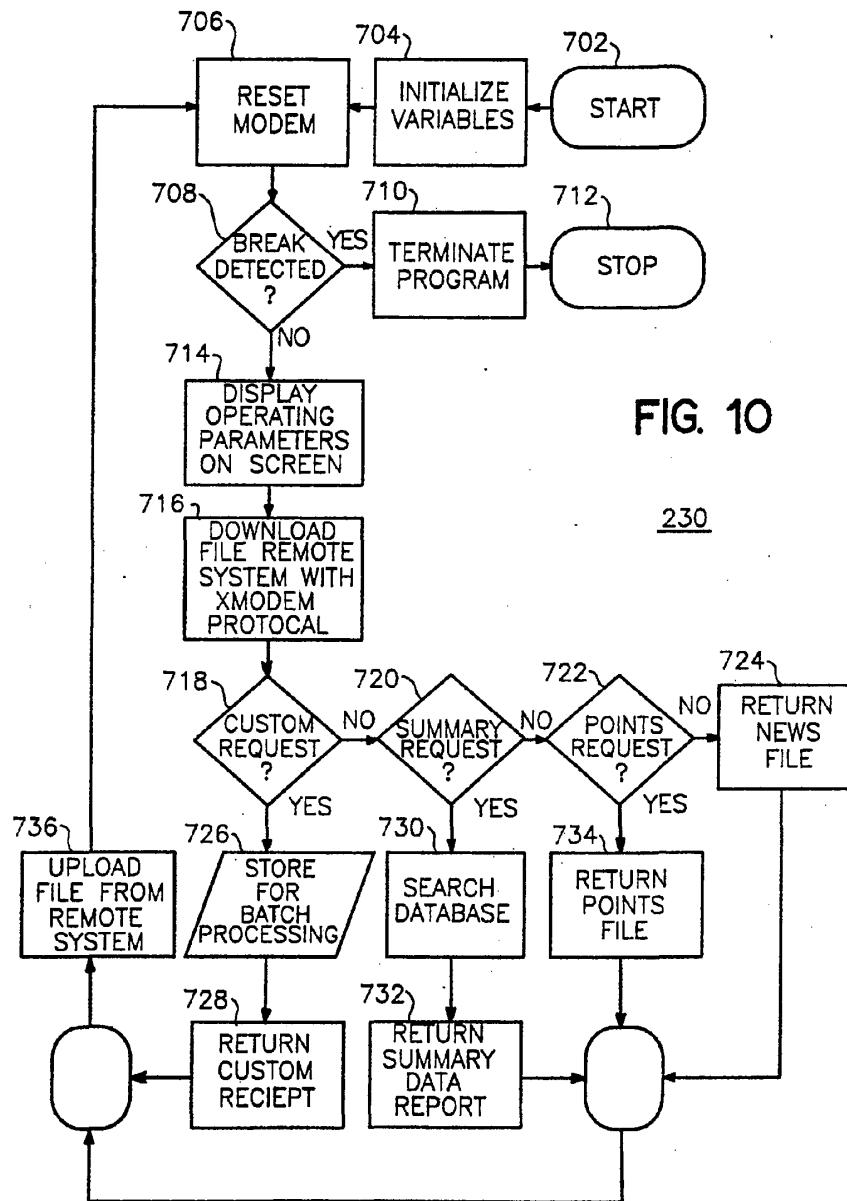
FIG. 9

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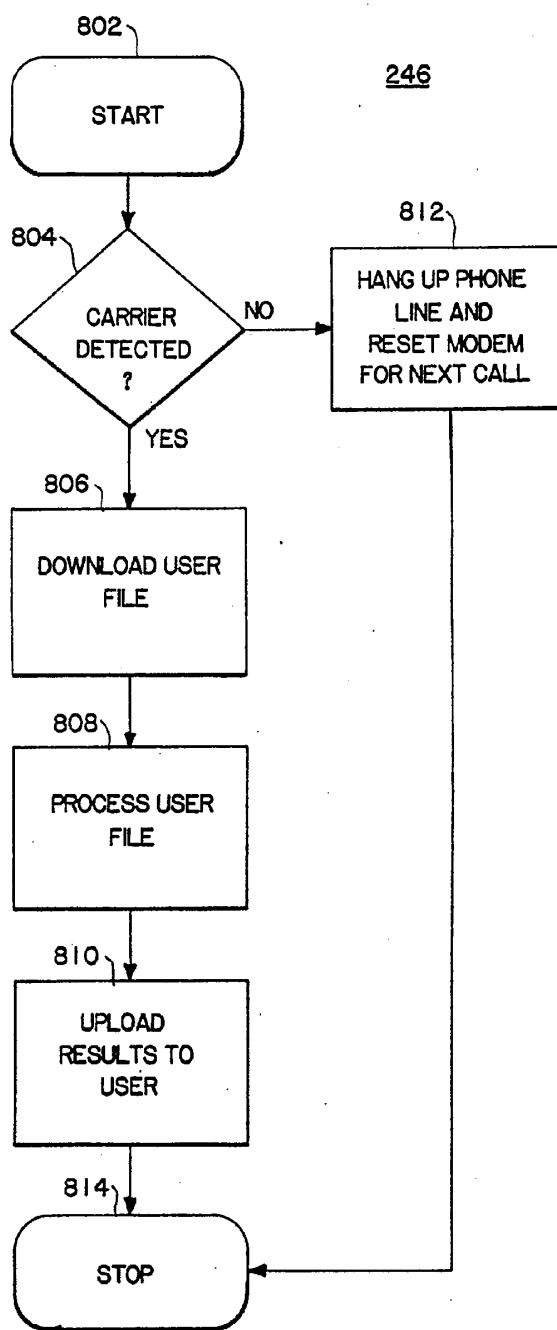
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FIG. 11



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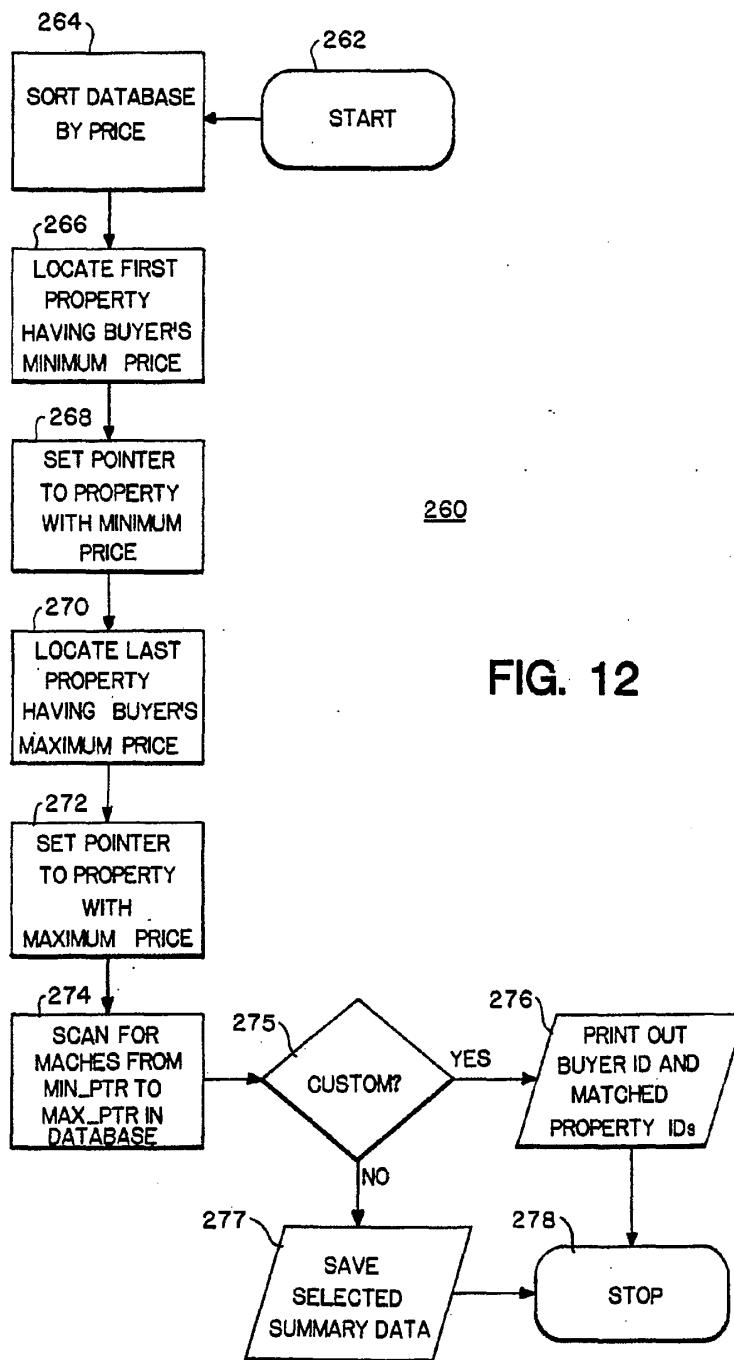


FIG. 12

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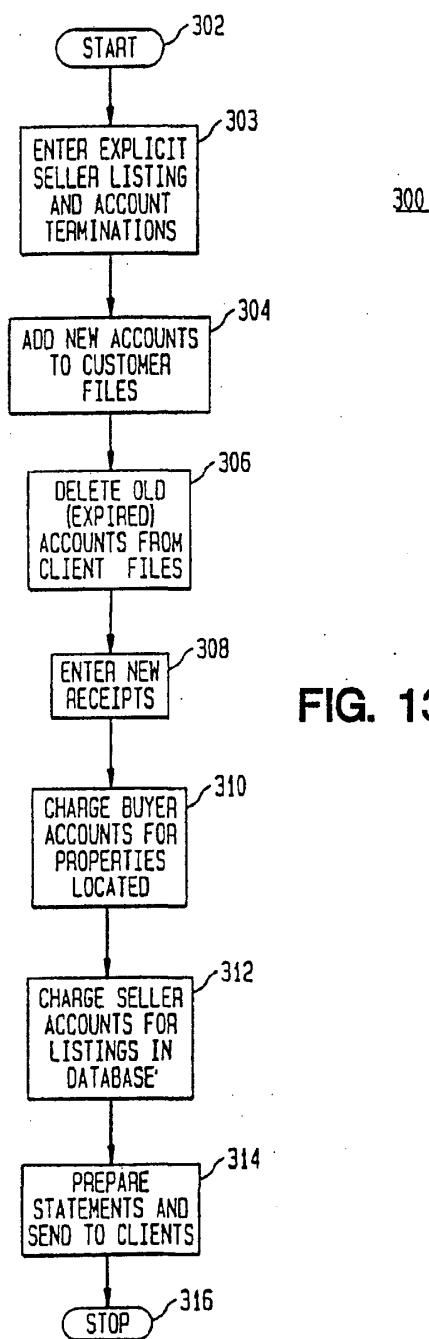


FIG. 13

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**REAL ESTATE SEARCH AND LOCATION
SYSTEM AND METHOD**

TECHNICAL FIELD

This is a continuation-in-part of application Ser. No. 841,515 filed Mar. 19, 1986 of common inventorship and assignment now U.S. Pat. No. 4,870,576.

The present invention pertains to data processing systems for the location of real estate properties for purchase through the use of an interactive graphical locator interface for developing geographic area indications.

BACKGROUND OF THE INVENTION

Listings of available real estate are typically stored in a central computer system, generally referred to as a "multiple listing service". This computer-stored listing may be accessed through terminals for retrieval of specific information relating to a given property. However, search of the stored information is typically dependent on the operator's intricate knowledge of the local area, its political subdivisions, and informal housing tract designations. Furthermore, such listings are usually maintained for each county, and multiple accesses of diverse systems are often required for a complete location of all available properties. Finally, no provision for searches by multiple criteria, including geographic location is made in prior systems.

THEORY OF THE INVENTION

The system and method of the present invention comprises a host system for maintaining a database of available properties, receiving data from both buyers and sellers of properties, and searching the database using buyer's criteria. The system and method of the present invention also comprises seller and remote systems for creating, storing, updating, and transmitting buyer and seller data to the host. The system and method of the present invention are applicable for residential, commercial, industrial and other special purpose uses of the real estate involving sale, lease or rent. All geographic location performed by the system of the present invention employs a graphical locator interface for specifying property locations.

The user can create a property search file by selecting the "Create" option from the Main Menu. A viewport is displayed and map boundaries are drawn on-screen. Inside this display the user can control the position and size of a "rubberband" window box. Properties appear as dots on the map.

A labeled distance indicator is displayed which calculates the distance between the window box center and the selected landmark location. The user can change the landmark location from a menu of landmarks. The label and distance indicator are then updated automatically. As the user changes the window box position, the labeled distance indicator changes to reflect the distance from the displayed landmark. The user can center the window box over the landmark automatically [via the home key]. Price and size minimum and maximum indicators appear below the viewport. The user can change the minimum and maximum indicators to refresh the points display. Only these property points within the minimum-maximum limits are drawn. The data for these points are referred to as the points file. The user can change the size of the window box.

The user can then change the world coordinate display to equal the boundaries of the window box. The size of the viewport remains constant so that the display now appears to have zoomed down closer to earth. Map boundary lines are displayed with greater detail and a "rubberband" circle is displayed which allows the user to enclose a search boundary on the map. The user can then either return to the original zoom-up display or save the center location and radius values of the rubberband circle.

The labeled distance indicator is redisplayed and now calculates the distance between the rubberband circle center and the current landmark location. The user can change the size of the rubberband circle. A radius indicator is displayed which calculates the radius of the rubberband circle. As the user changes the position and size of the rubberband circle, the labeled distance and radius indicators are updated to reflect the changes.

Having entered the search location boundary, the user is then prompted for the numerical range data entries.

Having selected numerical range data values, the user is then prompted with a series of menus and asked for selections.

When the final menu is displayed and all data entries have been successfully entered, the user has successfully created a property search file and is returned to the Main Menu.

The present invention comprises a system of computer software for creating and maintaining both a real estate property database and a corresponding file of hard-copy real estate property listing advertisements, and for allowing searches of the database. A "host system" having a database can be searched from "remote" computer systems by the use of a public domain software program that is menu driven and includes a graphical locator interface to specify accurate search location boundaries.

The search facility enables a remote user to obtain a custom selected portion of the hard-copy property listing file without having to obtain the entire file. The search facility also enables the user to obtain many different custom-selected sets of files from the hard-copy property listing file.

The system of the present invention is implemented as three main computer systems:

1. A host system which accepts both property listing files and property search files from remote locations, maintains the property database and performs searches, reports system errors, maintains customer accounts, and calculates statistics. The host system has:

(a) Download options - news files and points files
(b) Search options - search summaries and custom searches

2. A property listing maintenance system which enables a remote user to create and update a property listing file and then transmit it to the host system.

3. A property search maintenance system that enables a remote user to create and update a property search file and then transmit it to the host system. The system also maintains archive files of searches that were already processed.

Host Receiving System

The host system polls a standard telephone line while waiting for remote data transmissions. When the host system receives a call, it brings the telephone line off-hook. If a carrier signal is detected, the host system

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conforms to the specified communication parameters and waits for incoming data.

The host system downloads a data file using an XMODEM protocol. (downloads user file with XMODEM). See 1. The host system then goes back on-hook and polls the telephone line for more calls.

Any data transmission errors of spurious calls occurring after the host system brings the telephone line off-hook causes the host system to hang up and poll for more calls.

Maintain

Received data files are placed on queues set up for batch processing. A search queue, an addition queue, and a deletion queue are all processed for application to the property database. When batch processing in the host system begins, the host reads the property database into memory and processes the deletions queue. Next, the addition queue is added to the property database. The updated property database is then sorted so that the search queue may be processed. When all the search processing is complete, the property database is then sorted again for filing and over-written to the property database file on disk.

Custom Search

The search processing procedure compares property data records to the search being processed. Minimum-/maximum numerical fields in the property data records are checked against the associated numerical ranges of the search. Property data menu selections are checked against their associated search menu selection arrays. The distance from the property data records' location to the search area center location is calculated with the distance formula and compared to the search boundary radius value. The search processing produces several files that are used for further processing. A file of search results is produced which contains an identification for each search on the search queue plus a list (if any) of the properties that were selected in the search. From this file, a file of customer mailing labels is produced. Another file is also created which contains a count of the number of times each property data record was selected during the search processing. This simplifies hard-copy duplication tasks and eliminates unnecessary duplications.

During the subsequent processing, hard-copy duplicates are made for materials relating to each property selected. The results of each search are collected and assembled from the duplicates and labeled for shipping. The finished search results are then shipped to customers. See 2.

Accounting

Customer accounts are created and maintained by separating the customers into two groups—Buyers and Sellers. Buyer accounts are used to search the property data file while Seller accounts are used for property listings.

The Buyer account list contains records with identification data fields and financial resource data fields. The Buyer account system interactively prompts for new Buyer accounts—automatically assigning serial numbers, and new payment data. The Buyer account list is then read into memory from the Buyer account file so that new accounts and payments can be added. The resource field that accounts for time on the system is automatically updated. Buyer account records with deficient resource fields are automatically deleted. The Buyer account file is then overwritten.

Similarly, the Seller account list also contains records with identification data fields plus a resource data field. The Seller account system interactively prompts for Seller accounts to be terminated, new Seller accounts—automatically assigning serial numbers, and new payment data. The Seller account list is then read into memory from the Seller account file so that new accounts and payments can be added and terminations processed. The resource field that accounts for time on the system is automatically updated. Seller account records with a deficient resource field are automatically deleted. The Seller account file is then overwritten.

A log is written during the accounting process to document all entries. It also serves to document any automatic processing which may occur.

Both the Buyer and Seller accounting systems produce receipt files which are printed to inform the customer of the results of processing. Serial numbers and payment receipts are issued in this manner. Seller terminations receipts are also issued in this manner.

Statistics

The host system calculates statistics by reading the property data file into memory and traversing the property database. Minimum, maximum, count, percentage, mean, and standard deviation statistics are then calculated where applicable and written to a file with all statistics being clearly labeled. This file includes special printer functions so that a neat and organized report can be printed. Price, size, X, and Y data are written to the points file.

A system check routine is included to track potential errors in both the Buyer and Seller accounting systems. In the Seller accounting system, the Seller account file is checked against the property database and the errors are reported. In both the Buyer and Seller accounting systems, accounts with deficient resources are also reported.

Property Listing File Program

The Property Listing File Program is used to create, maintain, and transmit property listing files to the host system. It interactively prompts for entries, is error trapped, and requires no previous knowledge about either the remote or host systems.

The user can create a property listing file by selecting the "Create" option from the Main Menu. A viewport is displayed and map boundaries are drawn on screen. Inside this display, the user can control the position of a rubberband window box.

The user may then change the world coordinate display to equal the boundaries of the window box. The size of the viewport remains constant so that the display now appears to have zoomed down closer to earth. Map boundary lines with erasable labels are displayed with greater detail and a movable crosshair cursor is displayed which allows the user to pinpoint a location on the map. The user can then either return to the original zoom-up display or save the location of the crosshair cursor.

Having selected a location, the user is then prompted for the address of the property. The user must enter an address.

Having entered the address, the user is then prompted for numerical property data entries. If an invalid value is entered the user is again prompted for the same input.

Having entered the numerical property data entries, the user is then prompted for tracking directions to the property. If an invalid value is entered, the user is prompted for the same input.

Having selected numerical property data values, the user is then prompted with a series of menus and asked for selections. If an invalid menu selection value is entered the user is again prompted for the same input.

When the final menu is displayed and all data entries have been successfully entered, the property listing data is over-written to a disk file. The user has successfully created a property listing file and is returned to the Main Menu.

From the Main Menu the user can then choose to update the property listing file currently on disk. By selecting the "Display/Update" option the property listing data is read into memory and the Display/Update menu is displayed to allow the user to update either the location, address, numerical or menu data sections separately. When the user is finished editing a section, he is returned back to the Display/Update menu to allow him to edit another section.

The traveling directions update procedure displays the property address data and allows the user to edit each portion of the address separately. After editing a portion of the traveling directions, the entire traveling directions are redisplayed. When the user is satisfied with the address data, he is returned to the Display/Update menu.

The location update procedure is identical to the property listing map/location interface described previously.

The numerical data update procedure displays the numerical data and allows the user to edit each portion separately. After editing a portion of the numerical data, the numerical data is redisplayed. When the user is satisfied with the numerical data, he is returned to the Display/Update menu.

The menu data update procedure displays the menu data and allows the user to edit each portion separately. After editing a portion of the menu data, the menu data is redisplayed. When the user is satisfied with the menu data, he is returned to the Display/Update menu.

When the user is satisfied that the property listing file is complete, he can select the "Print" option from the Main Menu to print the Property Listing File. The property listing data is read into memory and copied to the printer with each value clearly labeled. When the printing is completed, the user is returned to the Main Menu.

The completed property listing file may be transmitted to the host system by selecting the "Send" option from the Main Menu. The user is then prompted for account identification data. The property listing file is read into memory and the account identification data added to it. All dialing and communications parameters are set automatically and the program takes the remote system off-hook and dials the host system. The remote system then waits for a carrier tone. If no carrier is present the remote system times-out and returns a diagnostic error message to the user. If a problem exists with the remote system while off-hook, the program brings the system back on-hook and displays a diagnostic error message or aborts processing.

If the remote system receives a carrier tone from the host system, the connection is established and the remote system uploads the property listing file to the host system using the XMODEM protocol. The remote system then waits for a diagnostic message from the host system and displays the message to the user. The program then brings the telephone line back on-hook and returns the user to the Main Menu.

Property Search File Program

The Property Search File Program is used to create, maintain, and transmit property search files to the host system. It interactively prompts for entries, is error trapped, and requires no previous knowledge about either the remote or host systems.

From the Main Menu the user can then choose to update the property search file currently on disk. By selecting the "Display/Update" option the property search data is read into memory and the Display/Update menu is displayed to allow the user to update either the location, numerical ranges or menu data sections separately. When the user is finished editing a section, he is returned back to the Display/Update menu to allow him to edit another section. When the user is finished updating the property search data, the property search data is over-written to the disk file and the user is returned to the Main Menu.

The location update procedure is identical to the search location map interface described previously.

The numerical range data update procedure displays the numerical range data and allows the user to edit each portion separately. After editing a portion of the numerical range data, the numerical range data is redisplayed. When the user is satisfied with the numerical range data that is displayed, he is returned to the Display/Update menu.

The menu data update procedure displays a category menu to allow the user to edit each portion of the menu data separately. After editing a portion of the menu data, the menu data is redisplayed. When the user is satisfied with the menu data, he is returned to the Display/Update menu.

When the user is satisfied that the property search file is complete, he can select the "Print" option from the Main Menu to print the Property Search File. The property search data is read into memory and copied to the printer with each value clearly labeled. When the printing is completed, the user is returned to the Main Menu.

The completed property search file may be transmitted to the host system by selecting the "Send" option from the Main Menu. The user is then prompted for account identification data, search name data, baud rate data, and dialing prefix data. The property search file is read into memory and this data is added to it. The remaining communications parameters are set automatically and the program takes the remote system off-hook and dials the host system. The remote system then waits for a carrier tone. If no carrier is present the remote system times-out and returns a diagnostic error message to the user. If a problem exists with the remote system while off-hook, the program brings the system back on hook and displays a diagnostic error message or aborts processing.

If the remote system receives a carrier tone from the host system, the connection is established and uploads the request to the host system. After waiting for processing, it downloads the results. The program then brings the telephone line back on-hook and returns the user to the Main Menu.

BRIEF DESCRIPTION OF THE FIGURES

FIG. 1 is an overall block diagram of a system typical of the present invention.

FIG. 2 is a functional block diagram of the system of the present invention.

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FIG. 3A is a depiction of a map generated on a CRT according to the present invention.

FIG. 3B is a map showing greater detail and displayed on a CRT according to the present invention.

FIG. 4 is a flow diagram of the procedure create buyers search specification file.

FIG. 5 is a flow diagram of the procedure obtained new center and radius for display circle.

FIG. 6 is a flow diagram of a generalized procedure for the zooming of the map display of the present invention.

FIG. 7 is a more detailed flow diagram of the procedure close SRPROP.DAT and upload data to host system.

FIG. 8 is a more detailed flow diagram of the procedure upload request to host computer and prompt for CR.

FIG. 9 is a flow diagram of the procedure maintain data base.

FIG. 10 is a flow diagram of the procedure receive buyers search specifications.

FIG. 11 is a flow diagram of the procedure receive file from remote system and acknowledge.

FIG. 12 is a flow diagram of the procedure search data base of properties using buyers specifications.

FIG. 13 is a flow diagram of the procedure update accounting data for buyers and sellers.

DETAILED DESCRIPTION

Referring now to FIG. 1, there is shown an overview block diagram of the entire system of the invention which includes a host computer system 200 which is connected by telecommunications links 20 to a plurality of remote computer systems 100A, 100B and 100C. Host system 200 maintains a database of property listings 202 which contains a plurality of property listings submitted by those with properties to sell, lease or rent. The database is used for search and delivery of relevant property information to those inquiring of the system with certain specifications to be described later. Host system 200 also maintains a set of client accounts 204, one account per client (either a buyer or seller). Charging for the use of the system is based upon a continual update of these client accounts. Host system 200 also uses a mail service 30 such as the U.S. mail service (but not limited thereto) for communication and billing purposes. Each remote system, 100A, 100B and 100C, is capable of interrogating the database 202 by communicating a set of specifications for a desired property to be purchased to host system 200. These specifications are derived from buyer input data 12A, 12B and 12C. The buyer input data is interactively gathered from the buyer by the remote system, formatted, and transmitted with an error-checking protocol to the host system. The host system either processes the search data (also points files and news files) on-line and returns a summary result or batches the interrogation requests for subsequent processing off-line. Similar to the communications functions by host system 200, communications also occur with sellers and remote system operators through mail service 30.

Referring now to FIG. 2, there is shown a procedural overview block diagram of the present invention. The system 10 of the present invention comprises three principal components, host system 200, remote system 100, and seller system 500. It will be understood that although only one seller system 500 is shown, a plurality of such systems exist and interface to host 20. Similarly, although only one remote system 100 is shown a plural-

ity of such systems exist and interface to host 200. The procedural components of host system 200 include maintain database procedures 210, search database procedures 260 receive buyers search specification procedures 230, prepare output of search result procedures 280, statistical analysis procedures 290 (which includes generation of the points file which consists of X, Y, price and size data values for each property), and accounting procedures 300.

10 Maintain database procedures 210 first deletes listings that are no longer of use and then adds new listings to the database. The source of new properties in the database is seller system 500 wherein complete specifications are prepared and delivered to host system 200 through a variety of means. Database maintenance procedures 210 also include an additional amount of information added through a location system for new properties to be described later.

Database search procedures 260 include an application of buyer search specifications to the database. The receiving of buyer search specifications is conducted via telecommunications link 20 depicted in FIG. 1. Remote systems according to the present invention are interfaced via a modem or other such telecommunications device to host system 200 which controls its own telecommunications line and receives information from remote systems with validation and error-checking procedures. On receipt of such valid information a search specification is built within host system 200 and is queued for later processing during an off-line period in the host. Receipt of a buyer specification file is acknowledged to the remote system and a status message is delivered prior to termination of the telecommunications link. The output of a database search, if successful, is either a summary of the property record or will include a listing of a given buyer identification number followed by the serial numbers of those property listings in the database which fall within the range of specification created by the buyer. This listing which pairs buyers with located properties then permits further processing in host system 200.

35 The output listing from host system 200 is stored in three files. The first file is the identification of the search which identifies the actual buyer, the search name, and the serial numbers of any properties which have been selected. In addition, a list of mailing labels is created with the names and addresses of the buyers for whom searches have been performed. This list of mailing labels is created by referencing the buyer identification number against the host system accounting files.

40 Another procedure in host system 200 counts the number of times each property listing serial number was selected during batch processing and writes that information to a file. Subsequently duplicates of the individual property advertisements are made. Then, during further processing, the searches are collected from these duplicates and placed with the printed search results into an envelope with the corresponding mailing label and shipped to the buyer.

45 Another function of host system 200 is accounting functions 300. These accounting functions include charging for services rendered to both sellers and buyers. Sellers are charged by the number of days that their property advertisement is listed in the database. The buyer is charged by the search. The type of search can involve varying costs.

50 Typically the charge to buyers is done on a declining balance arrangement, wherein a minimum charge of a

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certain number of requests is applied regardless of the outcome of any search, including invalidity of search data.

Yet another function of host system 200 is statistical analysis functions 290. Statistical analysis may occur on the total contents of the database at any given time, the average contents of the database over a longer period of time, or statistical analysis may be performed to detail the nature of search specifications being transmitted to host system 200. X, Y price & size points file is written.

There are three basic types of variables used in the system of the present invention: (1) numerical; (2) array or menu selection; and (3) floating point location. Average minimum, maximum and standard deviation is computed for numerical data. Finally a count of the number 15 of property listings in the database and a percentage of those with a mortgage, and an average mortgage rate are calculated. A second major component of system 10 is remote system 100. Remote system 100 is comprised of two principle sub-systems: create search specification 20 file 110 and transmit search file 150. Create search specification file 110 is the module seen by potential buyers of properties wishing to interrogate host system database 202. The unique user interface incorporated within module 110 includes a graphical locator which permits precise location of desired area for property purchase with reference to a global coordinate system. This location is selected through the use of manipulator keys or pointing devices such as a mouse, light pen or other known devices which allow positioning of a graphical interface selector in order to locate both property location and distance specifications without resort to numeric data on the part of the user.

From the main on-screen menu, the user selects the create option. The system displays the graphical locator interface which draws a map on the display (shown in FIG. 3A) with points indicators. Superimposed over the map is a window box that is non-destructive. The user has control of the position and size of the window box through a set of keys or locator. Also on-screen is a distance indicator which calculates the distance in miles from the center of the window box to a changeable landmark location on the map. The user can display a list of landmarks; change the selected landmark and the actual display is automatically updated. The landmark is also labeled on the map. The minimum/maximum indicators appear below the viewpoint. These indicators can be changed so that when refreshed, only those points whose price and size are within the minimum/maximum limits are displayed. The user can also automatically center the window box over the current landmark. After selecting the landmark, moving the window box, and selecting its size, the user activates a key sequence to "zoom" the display. In other words, the viewport will then display the actual boundaries of the window box so that display appears to have zoomed down closer to earth (shown in FIG. 3B). A "rubber band" circle then appears which is normalized to the size of the viewport. The user may move this circle on the display and also change its size. There is displayed a 45 radius indicator indicating the actual radius of the circle in miles along with a corresponding distance indicator from the specified landmark. Once the user has selected his search boundary by selecting an appropriate circle, that data may be saved or changed.

After saving the location data, the user is prompted for numerical range data, such as minimum and maximum price for the target listing. After having selected

several numerical ranges, a series of menus are displayed so that the user may select one or several selections on each menu.

After the completion of the questioning cycle, all 5 data entered by the user is stored as a search specification. The user is then allowed to print hard copy of the search specification prior to subsequent transmission of the search specification to the host system. A second procedure allows editing of a previously created search specification. This process termed "update" presents a list of the parameters entered by the user and allows any given parameter to be modified, subsequently re-saving the data and again presenting menu choices for transmission to the host, further update, and creation.

After creation and validation of search specifications and approval of the final specification by the buyer, such specification is transmitted via telecommunications links 20 to host system 200 for application to the database. After database search, results are prepared as previously described and are transmitted or mailed back to the potential buyer for his use.

A final component of system 10 is seller system 500, which comprises preparation of a property specification 510. Such a property specification contains the same data which is interrogated by a potential buyer, but such data is definite and not in ranged numerical form. This is obvious since a seller generally only has a fixed number of, for instance bedrooms in his house, and would not necessarily specify that he has a house containing 2 30 to 4 bedrooms. After preparation of a seller specification for a property, that information is transmitted to host system 200 and used in database maintenance for entry of new property information into the database. After entry, such new property information becomes 35 available for search by all buyers.

Referring now to FIG. 4, there is shown a detailed flow chart for Create Specification Procedure 110, which is part of remote system 100. Create Specification Procedure 110 begins at the block labeled start 112 and proceeds to initialize the various memory locations and variables required for its own internal processing at block 114. After initialization, the procedure obtains a new center and radius (location information), and price and size information from the user at 116. Obtaining location information will be described more fully hereinafter. After locating desired search boundary, the system prompts for and receives input regarding various specifications of a property at 118. Such specifications include ranges for price, lot size (i.e. minimum/maximum indicators), number of bedrooms, and other numerical data, as well as menu selections for home style, sewage system, roof type, and other such housing elements. After receiving and validating all such information, a specification file labeled SRPROP.DAT is written to a mass storage device for saving until future processing can commence at 120. Finally, the file so written is transmitted to host system 200 at block 122 and processing to create a property stops at stop block 124. Block 122 is depicted on FIG. 2 as block 150, "transmit buyer's search file to host."

Referring now to FIG. 5, there is shown a more detailed view of procedures required for obtaining new center and radius for property location purposes shown as block 116 on FIG. 4. The procedures for obtaining a new radius and center depend upon the creation of a scaled map (shown in FIGS. 3A,B) of the target area over which the database contains properties. This map is generated on a display screen for use by the user.

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Procedure 116 begins at start block 602 and initializing its own variables in order to begin processing. Such variables are local in scope and do not interfere with initialization processing conducted by the calling routine at 114.

Control travels from start block 602 to block 604, where it is seen that the variables are initialized. After the variables are initialized, the world coordinates are set to their maximum values in block 606. Next, the points file must be read into memory from the downloaded points file sitting in the user's disk storage medium, as shown in block 608.

Control then proceeds to decision block 610, where it is determined whether the user has completed his location boundary selection. If the user has completed this selection, control proceeds to block 636, where it is shown that the center and radius coordinates for the map are changed to the new center and radius coordinates, just selected. Then, the data values corresponding to the min and max indicators displayed on the screen are saved to a disk file. Then the procedure stops at block 640. If the user has not completed his boundary location selection, processing proceeds from decision block 610 to block 612, where the last selected (most current) world coordinates are retrieved from memory. These world coordinates are then used in block 614 to redisplay the map through the fixed viewport. The points file is then drawn, as shown in block 616. The min/max indicators, which are displayed on screen, are set in block 617.

In decision block 618, it is determined whether the min/max indicators have changed. If they have, the points file is erased in block 622. A "filter" is used to eliminate points not within the limits of the min/max indicators set in block 617. In this way, when control leaves block 620 to block 616, only the new points within the set min/max indicators will be redrawn. If it is determined at decision block 618 that the min/max indicators have not been changed, control proceeds to decision block 624.

At decision block 624, an evaluation of the variable "DONE" is performed. If DONE is equal to 0, this is indicative of the fact that the user wishes to zoom the display downward, that is, obtain a more detailed view of a smaller area of the map, and zoom down procedure 628, described more fully hereinafter, is executed. In the event that done is not equal to 0, evaluation 626 checks whether done is equal to 2. If it is, this is an indication that the user wishes to zoom up, that is, view a larger area of the map with correspondingly less detail, also described hereinafter. In the event that done is not equal to 0 or 2 as determined in decisions 624 and 626, processing continues by looping to execute decision 610 to determine whether the user has indicated that he is finished with the property location selection procedure. If the user is finished, as indicated at decision 610, the new center and radius of the selected region are stored in variables indicative of the center CX and CY and indicative of the radius RAD and processing terminates at stop operation 640.

Operations 628 zoom-down and 630 zoom-up are depicted as a general procedure type in FIG. 6 as zoom view system 400. Processing begins at start block 410 and proceeds through a local initialization of variables at block 412.

After variable initialization, actual key strokes and locator position are monitored by the program so that the initialized position variable can be incremented or

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decremented to change the size or location of the circle or window box. All corresponding variables that are associated with the center locations are updated with these incremental values.

5 In the specific case of operation of the remote system on an IBM personal computer. Various special keys located on the cursor key pad are indicative of desired functionality within the zooming procedures. For instance the plus (+) symbol key is indicative of the users desiring a zoom-out operation while the minus (-) symbol key is indicative of the users desiring to zoom-in the display. The cursor keys, left arrow, right arrow, up arrow, and down arrow, move the center location of the viewing selection region (whether a rectangle or a circle) in directions corresponding to north, south, east, and west. The page down (PgDn) key actually executes a selected zoom by changing the world coordinate system to match the view selector. The page up (PgUp) key resets the world coordinate system to its maximum, thus zooming out. After the selection of zoom mode and function, the bounds of the region which is to be visible on the screen, are calculated at operation 420. Decision 422 indicates whether the user has attempted to move the window box past the bounds of the viewport. If such an attempt has been determined at decision 422, operation 424 resets the incremental step value applied to the location variable to 0 to prevent further movement of the window box. Processing then loops and continues at scan for cursor key operation 414.

30 In the special case of the actuation of the page down (PgDn) key, detected in operations 416 and 418, and compared for in decision 419, the indication that the user is satisfied with the new coordinates of the window box results in operation 426 wherein the global coordinates are reset to the parameters defined for the new window box. Processing then terminates at stop operation 428.

Close and transmit operation 122 of system 110 is detailed more fully in FIG. 7 which depicts system 122, 40 prepare to transmit search file to host. FIG. 7 depicts the preparation of the search file for transmission which commences operation at start block 124 and proceeds to process the information number which is indicative of the particular buyer using the system at 134. At 136, the user is prompted to enter a password and that password is verified for its format.

At I/O operation 138, the search name information number and password are read and, if valid, at block 140 a file "SUYTEL.DAT" is opened for writing. Decision 142 verifies that the previously created SRPROP.DAT file exists. If the file does not exist, no search data is available and no branch is taken to operation 144 which closes all files and aborts the transaction because of a lack of search data. Assuming such search data exists, the data is copied from SRPROP.DAT to BUYTEL.DAT at operation 146. Processing then proceeds to transmitting the data at operation 150, and then terminates at stop block 152.

60 Referring now to FIG. 8, there is shown a more detailed flow chart of the operations of transmission operation 150. Transmission operation 150 commences operation at start block 154. At operation 156, the previously created BUYTEL.DAT file is open for read, and at block 158 the modem is instructed to dial the telephone to the host system 200 and wait for verification of connection with that system. At decision 160, a verification of correct connection parameters is made. If the connection is incorrect due to telecommunications net-

work conditions such as busy signal or no answer, a connection error is indicated at block 162 and processing continues by displaying a connection error message at block 163 and terminating at stop block 172. Provided that the connection has occurred successfully as determined at decision 160, operation 166 the remote system uploads the request to the host using an XMODEM protocol and waits for the request to be processed in block 167. After host processing, the remote system downloads the response file from the host in block 169. The XMODEM protocol is used for all transmission from the remote system 100 to host system 200 and assures integrity of transmitted and received data.

The contents of BUTYEL.DAT are transmitted to the host processor with XMODEM and after processing results are returned to the remote system with XMODEM.

Referring now to the processes and systems comprising host system 200, maintain database processing 210 shown in FIG. 9 commences at start block 212 and first queues for deletion property listings whose time in the database has expired as indicated by explicit orders to remove or an expiration indicated from the seller account file at 214. At block 216 the changes to current records in the database are processed by update. This process includes a verification of the presence of a record for the property in the database, a queuing of a deletion of that existing record, and a queuing of the adding of the updated record for that property. At block 218 all new properties are queued for addition to the database, and at block 219 the deletions queue and then the additions queue are applied to the database in order to bring the database up to current daily condition. Finally, a statistical analysis and points file generation procedure of the newly-updated database is performed at 220 and processing terminates at stop block 222.

Referring now to FIG. 10, there is shown a more detailed description of the receive buyer's processing request, 230. Processing begins at start block 702 and proceeds to block 704, where the variables are initialized. In block 706, the modem is reset to an operational state.

Decision block 708 determines whether a break in communications has occurred. If it has, the program is terminated in block 710 and processing stops in block 712. If no break is detected at block 708, processing proceeds to block 714, where the communications operation parameters are displayed on-screen to the user. Processing then proceeds to block 716, where the process request file is downloaded from the remote system to the host using XMODEM.

Decision block 718 determined whether a custom report request has been entered. If not, processing goes to decision block 720, where it is determined whether a summary report request has been entered. If not processing proceeds to decision block 722, where it is determined whether a points file has been requested. If not, processing then proceeds to block 724, where, by default, it is known that the news file is to be returned to the user.

Should decision block 718 determine that a custom report has been requested, processing proceeds to block 726, where the file is stored for batch processing to later produce a bound custom report which is then sent to the user in block 728. If decision block 720 determines that a summary report request has been entered, processing

proceeds to block 730, where the database is searched for the information necessary to generate the summary report, and then the summary report is returned in block 732. If decision block 722 determines that a points file request has been entered, processing proceeds to block 734, where the points file is returned to the user.

Block 736 uploads the files returned in blocks 728 or 732 or 734 or 724 to the remote system using XMODEM.

Referring now to FIG. 11, there is shown a more detailed view of block 246 receive file from remote system and acknowledge. Processing begins at start block 802 and proceeds to decision 804 wherein a carrier detect (CD) is monitored. If no carrier has been detected, processing proceeds to block 812 wherein the phone line is hung up and the modem is reset for the next call. Processing then terminates at block 814. If a carrier is detected at decision 804, then the modem is taken off-hook and ready to receive information. At block 806, the user file is downloaded with XMODEM. Processing then proceeds to block 808, where the user file is processed. Then, at block 810, the results of the processing from 808 are uploaded to the user. At block 812 the phone line is hung up and the modem reset for the next call. Processing then terminates at block 814. See revised FIG. 10.

Referring now to FIG. 12, there is shown a more detailed view of function 260 search database of properties. Processing commences at start block 262 and first proceeds to operation 264 wherein the database is sorted according to the price of properties contained therein. At block 266 the first property having the buyers specified minimum price is located, and at block 268 a pointer is set to point to that record containing the property. At block 270 the last property having the buyer specified maximum price is located and at block 272 a second pointer is set to the record containing that property. At block 274 a complete scan of all properties between the two pointers is conducted for matching all parameters specified by the buyer in the transmitted file. At decision block 275, it is determined whether results are the same for custom search processing. If customer search processing is required, control proceeds to block 276 where parameters are saved as property custom serial numbers. Selected data items are copied to a file and at I/O operation 276 the buyer ID for the particular search being processed together with the property serial numbers located during the matching process are written to a storage device for further processing. Additionally, information extracted from the accounting file containing the buyers name and address information for mailing label purposes is written to a storage device for further processing.

If custom search processing is not required, control proceeds to block 277, where the selected summary data items are stored. Processing then terminates block 278.

Referring now to FIG. 13, there is shown the accounting function 300 of host system 200. Processing begins at start block 302 and proceeds to block 303 where explicit seller listing account terminations are entered into the accounting system. Such terminations occur upon the sale of a property, generally, and cause the seller to be immediately cleared from the system. At block 304 new accounts received are added to the client files for both sellers and buyers. At block 306 old expired accounts are removed from the client files, both for buyers and sellers. At block 308 new cash receipts

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are entered into the system and at block 310 buyer accounts are debited according to the number of searches and according to the formulas previously described. At block 312 seller accounts are charged for the maintenance of property listings within the database. At block 314 the accounting files are scanned and statements are prepared for transmission to clients. Processing terminates at block 316.

Further details pertaining to the preferred embodiment are presented in the Appendix.

Preferably, the present invention may be implemented on an IBM or compatible personal computer system. Assuming sufficient memory and mass storage, the host system, seller system and remote system may operate on separate computers which communicate via the public telephone network using conventional modems.

The system software used to implement the system may include Greenleaf Software Communications Library MicroSoft MS-DOS™, HALO™ graphics, and a language compiler such as MicroSoft C, or its equivalent.

While the present invention has been described with reference to certain specific instances and examples, it will be understood by those skilled in the art that these are merely illustrative and are in no way intended to limit the scope of the invention. The true spirit and scope of the invention should therefore be construed only by reference to the appended claims.

I claim:

1. A method using a computer for locating available real estate properties comprising the steps of:
 - a) creating a database of the available real estate properties;
 - b) displaying a map of a desired geographic area;
 - c) selecting a first area having boundaries within the geographic area;
 - d) zooming in on the first area of the displayed map to about the boundaries of the first area to display a higher level of detail than the displayed map;
 - e) displaying the zoomed first area;
 - f) selecting a second area having boundaries within the zoomed first area;
 - g) displaying the second area and a plurality of points within the second area, each point representing the appropriate geographic location of an available real estate property; and

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h) identifying available real estate properties within the database which are located within the second area.

2. The method of claim 1 in which step (e) includes the further step of printing a report containing the location of the available real estate properties identified within the database.

3. The method of claim 2 in which there is included the further step of providing additional information regarding the features of the available real estate property.

4. The method of claim 1 in which there is included the further step of storing the points in a separate points file, containing at least the location information of the available real estate property.

5. The method of claim 1 wherein steps (d) and (e) utilize a pointing device.

6. The method of claim 1 further comprising the steps of:

7. The method of claim 1 wherein the database of the available real estate properties created in step (a) includes available commercial properties.

8. The method of claim 1 wherein the database of the available real estate properties created in step (a) includes available residential properties.

9. The method of claim 1 wherein the data base of the available real estate properties created in step (a) includes available real estate properties for rental purposes.

10. The method of claim 1 wherein the database of the available real estate properties created in step (a) includes available real estate properties for lease purposes.

11. The method of claim 1 wherein the database of the available real estate properties created in step (a) includes available real estate properties for commercial purposes.

12. The method of claim 1 wherein the database of the available real estate properties created in step (a) includes available real estate properties for residential purposes.

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**United States Court of Appeals
for the Federal Circuit**
MOVE, INC. v. REAL ESTATE ALLIANCE LTD., No. 2014-1657

CERTIFICATE OF SERVICE

I, Mariana Braylovskiy, being duly sworn according to law and being over the age of 18, upon my oath depose and say that:

Counsel Press was retained by CADWALADER, WICKERSHAM & TAFT LLP, Attorneys for Defendant/Counterclaimant-Appellant, Real Estate Alliance Ltd., to print this document. I am an employee of Counsel Press.

On **September 22, 2014**, counsel has authorized me to electronically file the foregoing **Brief for Defendant/Counterclaimant-Appellant** with the Clerk of Court using the CM/ECF System, which will serve via e-mail notice of such filing to any of the following counsel registered as CM/ECF users:

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Upon acceptance by the Court of the e-filed document, six paper copies will be filed with the Court, via Federal Express, within the time provided in the Court's rules.

September 22, 2014

/s/Mariana Braylovskiy
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